101st Congress, 1st Session - - - - - - - - - - House Document 101-19

TRINITY RIVER PROJECTS

COMMUNICATION

FROM

THE ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

TRANSMITTING

A REPORT FROM THE CHIEF OF ENGINEERS, DEPARTMENT OF THE ARMY, TO CONSTRUCT A GREENBELT CORRIDOR BETWEEN RAY ROBERTS DAM AND LEWISVILLE LAKE, TEXAS, TOGETHER WITH OTHER PERTINENT REPORTS, PURSUANT TO PUBLIC LAW 89-298, SEC. 301.

JANUARY 19, 1989.—Referred to the Committee on Public Works and Transportation and ordered to be printed

U.S. GOVERNMENT PRINTING OFFICE

93-301 WASHINGTON : 1989

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LETTER OF TRANSMITTAL

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310-0103

Honorable James C. Wright, Jr.
Speaker of the House
of Representatives
Washington, D. C. 20515

Dear Mr. Speaker:

Based on the construction authority for a modification to the authorized Trinity River projects, (Section 301 of the River and Harbor Act of 1965, Public Law 89-298), the Army Chief of Engineers has provided to this office a special report and recommendations to construct a greenbelt corridor between Ray Roberts Dam and Lewisville Lake, Texas, in lieu of authorized traditional recreation features at Lewisville Lake, together with other pertinent reports.

I have reviewed the report and recommendation of the Chief of Engineers, along with views of the State of Texas, the Departments of the Interior and Housing and Urban Development, the Environmental Protection Agency and the Federal Emergency Management Agency, which are set forth in the enclosed communications.

This modification is beyond the discretionary authority of the Department of the Army; therefore, specific Congressional action is required. Based on this review, on behalf of the Secretary of the Army, I recommend Congressional modification of the project for the greenbelt corridor plan. In order to avoid duplicate Federal contributions to recreation facilities, this recommendation is subject to including a clause in the implementing local cost-sharing agreement, which makes future recreational development at Lewisville Lake a non-Federal responsibility until an amount equal to the amount of the Federal share of the greenbelt substitution has been expended.

The Office of Management and Budget advises that the recommendation is in accord with the President's program. A copy of its letter is enclosed.

Sincerely,

Robert W. Page
Assistant Secretary of the Army
(Civil Works)

Enclosure

COMMENTS OF THE OFFICE OF MANAGEMENT AND BUDGET

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

October 25, 1988

Honorable Robert W. Page, Sr.
Assistant Secretary
of the Army (Civil Works)
Room 2E570 - Pentagon
Washington, D.C. 20310

Dear Mr. Page:

We have completed our review of the report on the Greenbelt Corridor Between Ray Roberts Dam and Lewisville Lake, Texas, as required under Executive Order 12322.

The Office of Management and Budget does not object to your submitting this report to Congress for post-authorization modification. The implementing local cost-sharing agreement should include a clause which makes the non-Federal sponsors responsible for further recreational development at Lewisville Lake at full non-Federal expense until an amount equal to the amount of the Federal share of the Greenbelt substitution has been expended. The Administration supports implementation of the project through the budget process in accordance with your recommendations and the recommendations of the Chief of Engineers.

Sincerely,

Robert K. Dawson
Associate Director
for Natural Resources,
Energy and Science

COMMENTS OF THE STATE OF TEXAS

STATE OF TEXAS
OFFICE OF THE GOVERNOR
AUSTIN, TEXAS 78711

WILLIAM P. CLEMENTS, JR.
GOVERNOR

October 21, 1987

Lieutenant General E. R. Heiberg III
Chief of Engineers
ATTN: CECW-P
Department of the Army
Washington, D.C. 20314-1000

Dear General Heiberg:

The proposed report of the Chief of Engineers on the Greenbelt Corridor between Ray Roberts Dam and Lewisville Lake, Texas, has been circulated for review among affected agencies.

The comments received expressed support of the Greenbelt Corridor concept, which was seen as providing multiple benefits and addressing a need for recreational resources in a major urban area. While not all agencies have responded, I am transmitting the comments received to facilitate the U.S. Army Corp of Engineers' review process.

Please feel free to contact me if I can be of assistance.

Sincerely,

T. C. Adams
State Single Point of Contact

TCA/rbpon

STATE OF TEXAS
OFFICE OF THE GOVERNOR
AUSTIN, TEXAS 78711

WILLIAM P. CLEMENTS, JR.
GOVERNOR

October 23, 1987

Lieutenant General E. R. Heiberg III
Chief of Engineers
ATTN: CECW-P
Department of the Army
Washington, C.D. 20314-1000

Dear General Heiberg:

Enclosed are subsequent comments received from the North Central Texas Council of Governments endorsing the Greenbelt Corridor concept.

Sincerely,

T. C. Adams
State Single Point of Contact

TCA/rbpon

North Central Texas Council of Governments

P. O. Drawer COG Arlington, Texas 76005—5888

September 18, 1987

T. C. Adams, Director
Special Projects
Governor's Office of Budget
and Planning
P. O. Box 12428
Austin, Texas 78711

RE: U. S. Army Corps of Engineers
Greenbelt Corridor Between
Ray Roberts Dam and Lewisville Lake
SAI# TX-87-08-09-19-0001-50

Dear Mr. Adams:

Thank you for submitting the above proposal for review as required by the Texas Review and Comment System (TRACS).

By resolution dated August 25, 1983, NCTCOG's Executive Board endorsed the concept of the proposed greenbelt corridor for Ray Roberts Lake. Therefore, we are waiving TRACS review of this project. The greenbelt corridor and the cooperative financing plan are considered as an innovative, regionally sound, and significant step in implementing the regional open space plan.

Again, thank you for an opportunity to review this application. If we can be of further service or assistance, please call.

Sincerely.

Paul Waddell

Paul Waddell
Director of Regional Services

PW:mah

X

RESOLUTION ENDORSING GREENBELT
FOR RAY ROBERTS LAKE

WHEREAS, a recognized purpose of the North Central Texas Council of Governments is to help local governments recognize regional opportunities, resolve regional problems, eliminate unnecessary duplication, and make joint regional decisions; and

WHEREAS, a NCTCOG regional open space plan indicates that the most highly regarded natural resources in this region lie in "environmental corridors" which generally follow streamlines and which are ideally suited for recreation; and

WHEREAS, the recently adopted North Central Texas Council of Governments Committee of the Future, 1983 Report recommends examination of existing and potential uses of stream corridors for the purpose of recommending a realistic and achievalbe regional strategy; and

WHEREAS, the NCTCOG Environmental Resources Advisory Committee, comprised of public officials, private citizens, economic interests, and public interest groups, and the NCTCOG Water Resources Council have unanimously endorsed the Lake Ray Roberts/Lake Lewisville recreational program in August, 1983; and

WHEREAS, the sponsors have indicated that they will provide recreational facilities of equal quality and location to adjoining communities at Lake Lewisville to replace those being inundated due to pool raise,

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE EXECUTIVE BOARD OF THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS:

Section 1. That the Executive Board of the North Central Texas Council of Governments endorses the concept of the proposed greenbelt corridor for Ray Roberts Lake and the cooperative financing of the entire project as innovative, regionally sound, and a significant step in implementing the regional open space plan.

Section 2. That the Executive Board of the North Central Texas Council of Governments requests the U.S. Army Corp of Engineers and participating agencies to carefully evaluate the greenbelt plan in order to minimize unnecessary hardships to adjoining landowners.

Section 3. That the Executive Director is authorized to forward this resolution to the appropriate officials at the City of Dallas, City of Denton, Texas Parks and Wildlife Department, U.S. Army Corps of Engineers, and other interested agencies.

Section 4. That this resolution shall be in effect immediately upon its adoption.

COMMENTS OF THE DEPARTMENT OF THE INTERIOR

United States Department of the Interior

PEP-RM 4239

OFFICE OF ENVIRONMENTAL PROJECT REVIEW
WASHINGTON, D.C. 20240

October 16, 1987

ER 87/992

Lieutenant General E. R. Heiberg III
Chief of Engineers
ATTN: DAEN-CWP
Department of the Army
Washington, D.C. 20314-1000

Dear General Heiberg:

Thank you for your letter of August 4, 1987, requesting our review of the proposed report of the Chief of Engineers, and other pertinent reports, on the Greenbelt Corridor Between Ray Roberts Dam and Lewisville Lake, Dalton County, Texas. The following comments are provided for your consideration.

We support the Corps of Engineers plan to develop the Greenbelt Corridor. The Greenbelt Corridor would connect two large blocks of public land and would preserve significant stream and riparian habitats; both of which are rapidly diminishing within the vicinity of the Dallas-Fort Worth metropolitan area. Recreational opportunities, including stream fishing, hiking, nature study, canoeing, and primitive camping, would be greatly enhanced by establishment of the Greenbelt Corridor.

Sincerely,

Bruce Blanchard, Director

COMMENTS OF THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

U.S. Department of Housing and Urban Development
Fort Worth Regional Office, Region VI
1600 Throckmorton
Fort Worth, Texas 76113-2905

AUG 12 1987

Lieutenant General E. R. Heiberg III
Chief of Engineers
ATTN: CECW-P
Department of the Army
Washington, D. C. 20314-1000

Dear General Heiberg:

The Notification Report and Post Authorization Change for Trinity River Basin, Elm Fork, Trinity River, Texas, regarding a proposal for a Greenbelt Corridor between Ray Roberts Dam and Lewisville Lake, dated April 1985, has been reviewed by this Regional Office.

The approval of the post authorization change would assure the preservation of the greenbelt corridor between Ray Roberts Lake and Lewisville Lake. Management of the corridor area by the Texas Park and Wildlife Department would be most desirable.

In addition, the Environmental Impact Assessment prepared by the Fort Worth District, U. S. Army Corps of Engineers, was reviewed. We concur in your finding of no significant impact.

The implementation of the greenbelt corridor is an excellent example of intergovernmental coordination and cooperation. Participation and cost sharing on the parts of Corps of Engineers, Texas Park and Wildlife Department and the Cities of Dallas and Denton are most commendable.

Sincerely,

For Sam R. Moseley
Regional Administrator--
Regional Housing Commissioner

COMMENTS OF THE ENVIRONMENTAL PROTECTION AGENCY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
ALLIED BANK TOWER AT FOUNTAIN PLACE
1445 ROSS AVENUE
DALLAS, TEXAS 75202

AUG 20 1987

REPLY TO: 6E-FT

Lieutenant General E. R. Heiberg III
Chief of Engineers
ATTN: CECW-P
Department of the Army
Washington, D.C. 20314-1000

Dear General Heiberg:

In complying with Section 309 of the Clean Air Act, we have completed our review of your agency's proposed report of the Chief of Engineers on Greenbelt Corridor Between Ray Roberts Dam and Lewisville Lake, Texas, and the report of the District Engineer. The report also included an Environmental Assessment and Finding of No Significant Impact on the Corridor.

Based upon our evaluation of the environmental assessment information provided, we have no objection to the proposed action as described. However, we ask that all reasonable precautions be taken to minimize associated environmental impacts.

Thank you for your coordination and consideration for the environment.

Sincerely yours,

Norm Thomas
Chief
Federal Activities Branch (6E-F)

COMMENTS OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY

Federal Emergency Management Agency

Region VI, Federal Center, 800 North Loop 288
Denton, Texas 76201-3698

September 9, 1987

Lt General E. R. Heiberg III
Chief of Engineers
ATTN: CECW-P
Department of the Army
Washington, D. C. 20314-1000

Dear General Heiberg:

Thank you for providing the opportunity for this Agency to review and comment on the proposed Greenbelt Corridor between Lake Ray Roberts Dam and Lewisville Lake, Texas.

A major responsibility of the Federal Emergency Management Agency is the administration of the National Flood Insurance Program. At the regional level this effort involves direct interaction with local governments in the implementation of floodplain management ordinances governing all development within identified flood hazard areas. To reduce the potential of flood damages to the greatest extent possible and also to reduce the expenditure of Federal funds for disaster relief, communities are encouraged and advised to preserve as much of the designated floodplain areas as possible for natural habitat and recreational purposes. The designation of the COE's proposed Greenbelt Corridor between the two subject lakes is in harmony with this Agency's goals and in fact enhances our efforts to restrict development within the flood hazard areas.

It is recommended that any public facilities such as public restrooms located within the Greenbelt Corridor be elevated or floodproofed to provide some degree of protection during periods of flooding. This would address the provisions of Executive Order 11988 with regard to applying flood hazard reduction measures in projects where certain facilities must be located within the identified flood hazard areas.

If you desire further information from this office concering the above comments, please contact me at the above address or by telephone at 817-898-9161.

Sincerely,

Maryetta Cunningham

Maryetta Cunningham
Natural Hazards
Program Specialist

GREENBELT CORRIDOR BETWEEN RAY ROBERTS DAM AND LEWISVILLE LAKE, TEXAS

REPORT OF THE CHIEF OF ENGINEERS, DEPARTMENT OF THE ARMY

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314

REPLY TO ATTENTION OF\

CECW-PM

December 24, 1987

SUBJECT: Greenbelt Corridor Between Ray Roberts Dam and Lewisville Lake, Texas

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on a proposed modification to the authorized recreational development for the Ray Roberts Lake project to allow acquisition and development of a greenbelt corridor along the Elm Fork of the Trinity River between Ray Roberts Dam and Lewisville Lake. It is accompanied by the Post Authorization Change Report prepared by the Fort Worth District. Public Law 89-298 contains authority for construction of water resource development features described in the Comprehensive Survey Report on Trinity River and Tributaries, Texas (reprinted as House Document 276, 89th Congress).

2. The 1965 construction authority for Ray Roberts Lake (PL 89-298, Section 301) included authority to raise the downstream Lewisville Lake pool elevation and develop new recreation facilities in response to the additional recreation demand resulting from the pool raise. Whereas the original plan called for traditional park development at Lewisville Lake, the plan recommended herein consists of acquiring a corridor of land between the two lakes and developing it as a greenbelt with trails and canoe launching facilities. The Cities of Denton and Dallas, local sponsors for the Ray Roberts Lake project, concur with the District Engineer's recommendation to substitute the greenbelt corridor recreation development for the traditional park development at Lewisville Lake. The Texas Parks and Wildlife Department has also expressed intent to participate as a local sponsor on the greenbelt plan. Any additional park development at Lewisville Lake (authorized by PL 89-298, Section 103) would be a non-Federal responsibility. Recreational development at Ray Roberts Lake would not be affected by this action.

3. The key departure of the greenbelt proposal from the authorized project is the quantity, location, and title of land ownership. House Document 276 authorized acquisition of 2900 acres in fee for public use and access at Lewisville Lake (2800 acres easement conversion

93-301 O - 89 - 2

and 100 acres fee simple). However, the plan that would most likely be implemented at Lewisville Lake would be a Facilities Only plan. The estimated total first cost of the Facilities Only plan is $4,272,000, based on October 1987 price levels. Average annual charges, based on a 50-year period of economic analysis and an interest rate of 8-5/8 percent are $636,000 and include operation, maintenance and replacements costs of $262,000. Average annual benefits are estimated to be $1,851,000, and the benefit-to-cost ratio is 2.9. Under this plan the first cost would be shared 50 percent to the Corps and 50 percent to the Cities of Dallas and Denton. The operation, maintenance, and replacement costs would be the responsibility of the cities. The recommended greenbelt plan would require fee acquisition of about 660 acres, acquisition of conservation easements on about 500 acres, and conversion from existing flowage easements to fee of about 440 acres. The first cost of the greenbelt plan, based on October 1987 price levels, is $3,243,000. Average annual charges, based on a 50-year period of economic analysis and an interest rate of 8 5/8 percent, are $338,000 and include operation, maintenance, and replacement costs of $53,000. Average annual benefits are estimated to be $1,530,000 and the benefit-to-cost ratio is 4.5.

4. Cost sharing for the greenbelt plan in accordance with PL 99-662 of the Water Resources Act of 1986 would be 50 percent Federal and 50 percent non-Federal. However, because of the sponsors' keen interest in development of this unique recreational opportunity, agreement has been reached that 25 percent be paid by the Texas Parks and Wildlife Department and that 37.5 percent be split between the cities of Dallas and Denton. The Federal share would be 37.5 percent. Operation, maintenance, and replacements would be the responsibility of the Texas Parks and Wildlife Department.

5. I recommend substitution of the Greenbelt Corridor between Ray Roberts Dam and Lewisville Lake, Texas, for the original plan of traditional park development at Lewisville Lake (Facilities Only plan) as authorized by PL 89-298, Section 301. Provisions of PL 89-298 shall apply to the Greenbelt Corridor plan. The cost sharing shall be in accordance with paragraph 4 above.

6. Extensive public involvement reveals that the greenbelt plan is strongly supported by the broad public interest, although some opposition has been expressed by affected landowners. The greenbelt offers a lower total Federal investment, a larger than 50% share of the costs to be borne by the local sponsors, and an opportunity to provide a needed resource unique to the area. Texas Parks and Wildlife Department has expressed written intent to provide financial and managerial support, including operation and maintenance.

7. The recommendations contained herein reflect information available at this time and current Departmental policies governing formulation of individual projects. They do not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program nor the perspective of higher review levels within the Executive Branch. Consequently, the recommendations may be modified before they are transmitted to the Congress as proposals for authorization and/or implementation funding.

MG, USA

E. R. HEIBERG III
Lieutenant General, USA Actg Chief
Chief of Engineers

REPORT OF THE DISTRICT ENGINEER

SYLLABUS

This Postauthorization Change Notification Report presents a comparison of the economics and social and environmental effects of a recommended Greenbelt Corridor between Ray Roberts Dam and Lewisville Lake with authorized recreation development at Lewisville Lake. The Rivers and Harbors Act of 1965, Section 301 (Public Law 89-298), contains authority for construction of Ray Roberts Dam and an increase in pool elevation at Lewisville Lake, both in the Trinity River Basin, Texas. It also provides for additional lands (2,900 acres) and new recreation development at Lewisville Lake to accommodate the water supply project. A recreation development plan for Lewisville Lake was formulated in 1972 which consists of 42 acres scattered among seven small park areas. That land acquisition plan was disapproved in a 1973 General Design Memorandum (GDM) pending formulation of additional alternatives. A plan for a greenbelt corridor between the lakes was conceptually formulated in 1974 Supplemental Information to the GDM. Although the greenbelt plan had the support of State and Federal agencies, it was not developed further at that time due to water rights disputes between the project sponsors which delayed the entire project until the drought of 1980. During the past decade or more, the emphasis in recreation planning has shifted to fewer, larger, and more efficient parks and to more involvement by local sponsors. The 42-acre plan is contained in the recreation contracts because it is the only plan that was available in detail when the contracts were signed.

In September 1980, the cities of Dallas and Denton entered into water supply and recreation contracts with the Government on the above items. Recreation development at Lewisville Lake, as contractually defined, consists of facilities development ($1,413,000 at 1980 price levels) and land acquisition (42 acres/$1,724,000 at 1980 price levels). The contracts state, however, that a "mutually acceptable" plan for recreation development will be prepared. The contractual plan is not consistent with current park management philosophies, is almost prohibitively expensive at today's land prices, and is not mutually acceptable to the project sponsors. In 1983, the city of Dallas requested that the Fort Worth District analyze the greenbelt plan in detail in lieu of the sponsors contractual obligation for Lewisville recreation development. The Texas Outdoor Recreation Plan (TORP) indicates a higher priority need for the type of recreation provided by the greenbelt relative to more traditional facilities development. Economic benefits of the greenbelt are estimated to be equivalent to those used in the cost allocations. Detailed discussion of alternatives, recreation needs, costs, and benefits are contained in the Environmental Impact Assessment which is attached to this document.

The proposal evaluated in this report consists of acquisition of a 6-mile strip of land (1600 acres) which would connect the two Corps of Engineers lakes and provide for public use and access. This plan would satisfy the contractual obligations of the cities of Dallas and Denton with regard to additional recreation development at Lewisville Lake. At the same time, it would take advantage of a rare opportunity to provide a type of recreation that is unique in the North Texas area. Consistent with provisions of the Federal Water Project Recreation Act of 1965 (PL 89-72), a plan for future development of additional traditional facilities is being provided in the Lewisville Master Plan update contingent upon future sponsorship and funding. Extensive public involvement indicates that the recommended greenbelt plan would be in the broad interest although controversial to present landowners. The greenbelt would have lower first costs, lower Federal cost, strong local sponsorship, one additional local sponsor, management by the most appropriate State agency, partial financing by the State, and lower operation and maintenance costs compared to traditional facilities development. (This report has been prepared in accordance with the guidance provided by ER 1105-2-10, appendix B.)

POSTAUTHORIZATION CHANGE
NOTIFICATION REPORT

GREENBELT CORRIDOR BETWEEN
RAY ROBERTS DAM AND LEWISVILLE LAKE

Description of Authorized Project

The Ray Roberts Lake and Lewisville Lake projects are important units in the system of reservoirs in the Trinity River Basin that includes Grapevine, Bardwell, Navarro Mills, Benbrook, Lavon, and Joe Pool Lakes. Roanoke and Tennessee Colony Lakes are authorized. The location of Ray Roberts, Lewisville, and several of the other lakes is shown on figure I. In combination with Lewisville Lake, Ray Roberts Lake will provide additional conservation storage through an exchange of storage with the existing facility while the same degree of flood control currently provided by the Lewisville project will be maintained. The Ray Roberts and Lewisville dams are located at river miles 60.0 and 30.0, respectively, on the Elm Fork of the Trinity River in Denton County, Texas. Ray Roberts Lake will have a conservation pool of 29,350 acres (632.5 feet msl) and a flood control pool of 36,900 acres (640.5 feet msl). A total of about 48,500 acres will be acquired for the Ray Roberts Lake project. Construction of Lewisville Lake was completed in 1959 with a conservation pool of 23,200 acres (515.0 feet msl) and a flood control pool of 39,080 acres (532.0 feet msl). Presently there is a total of 45,300 acres in fee and 5,700 acres in flowage easement for the Lewisville Lake project.

Lewisville Lake has a total of 21 parks covering a total of 5,326 acres. Lewisville recreation facilities include roads, parking, 63 boat launching lanes, 30 restrooms, 279 picnic units, 335 camping units, and 4 swimming beaches. Based upon the Ray Roberts Lake master plan (approved September 1983), 470 campsites, 275 picnic units, 30 boat launching lanes, 27 restrooms, and 2 swimming beaches will be constructed at Ray Roberts Lake. These facilities will be developed on 7 park areas encompassing a total of 3,898 acres. All project lands, park areas, and recreation facilities at Ray Roberts Lake will be operated and maintained by the Texas Parks and Wildlife Department (TPWD) based upon a draft contract currently under review by higher Corps authority.

Authorization

Section 301 of the Rivers and Harbors Act approved 27 October 1965 (Public Law 89-298) contains authority for construction of water resource development features of the Trinity River project substantially in accordance with House Document 276, 89th Congress, 1st Session. Aubrey (Ray Roberts) Lake, a feature of the Trinity River project, is authorized for the purposes of water supply, recreation, and fish and wildlife. Within Volume V of House Document 276, which contains the appendix for Recreation and Fish and Wildlife, are the descriptions of recreation resource developments associated with both Aubrey (Ray

Roberts) and Garza-Little Elm (Lewisville Lake). House Document 276 provides for a reallocation of flood storage to water conservation at Lewisville Lake (7 foot pool raise) with Ray Roberts Lake compensating for the same degree of flood storage. To accommodate that raise in conservation pool elevation at Lewisville Lake, House Document 276 provides for fee acquisition/easement conversion of 2,900 acres ($824,000 at 1962 price levels) specifically for public use and access and for new facilities development ($500,000 at 1962 price levels). These land and facility costs are specifically stated to be separable costs over and above other project requirements.

Funding Since Authorization

A history of Congressionally appropriated funding for the Ray Roberts Lake/Lewisville Lake pool raise is displayed in table I. The General Design Memorandum (GDM) and a Supplement to the GDM were approved in 1973 and 1974, respectively. Because of water rights disputes between the cities of Dallas and Denton, local sponsors for the project, a water supply contract was not entered into until 1980. Real estate acquisition began in September 1980, and construction of the project was initiated in September 1981. Deliberate impoundment of Ray Roberts Lake is scheduled for July 1987, and initiation of the 7-foot pool raise at Lewisville Lake is scheduled for February 1988.

Changes in Scope of Authorized Project

The proposed change is the acquisition of a 1,600-acre riparian corridor connecting the two lakes for public use and access purposes in lieu of more intensive facilities development at Lewisville Lake. The Master Plan for Lewisville Lake is currently being updated to include relocation of existing facilities as a joint project cost and the proposed greenbelt corridor as a specific recreation feature. A plan of development for additional traditional facilities will be provided in the Lewisville Master Plan update contingent upon future sponsorship and funding. Table II presents an overview of the scope of change in terms of land acquisition (total and specific recreation), total first cost, specific recreation cost, and recreation benefits.

Land Acquisition. House Document 276 (Volume V - Appendix V, Recreation and Fish and Wildlife) provides for acquisition of about 2,900 acres for public use and access at Lewisville Lake. Of that 2,900 acres, the House Document states that about 2,800 acres would be acquired in fee in lieu of existing flood flowage easements and 100 acres would be acquired in fee title above the upper guide contour to meet requirements for public use at the modified Lewisville Lake. The document further states that lands thus obtained should be blocked out in accordance with sound real estate practices, giving due consideration to specific recreation and public access needs in each area. The proposed greenbelt corridor would differ from the authorizing document in that 1,100 acres would be acquired in fee. Four hundred forty of those acres are presently encumbered by a flowage easement estate (see plate 1). A conservation easement would be acquired on 500 acres. The total

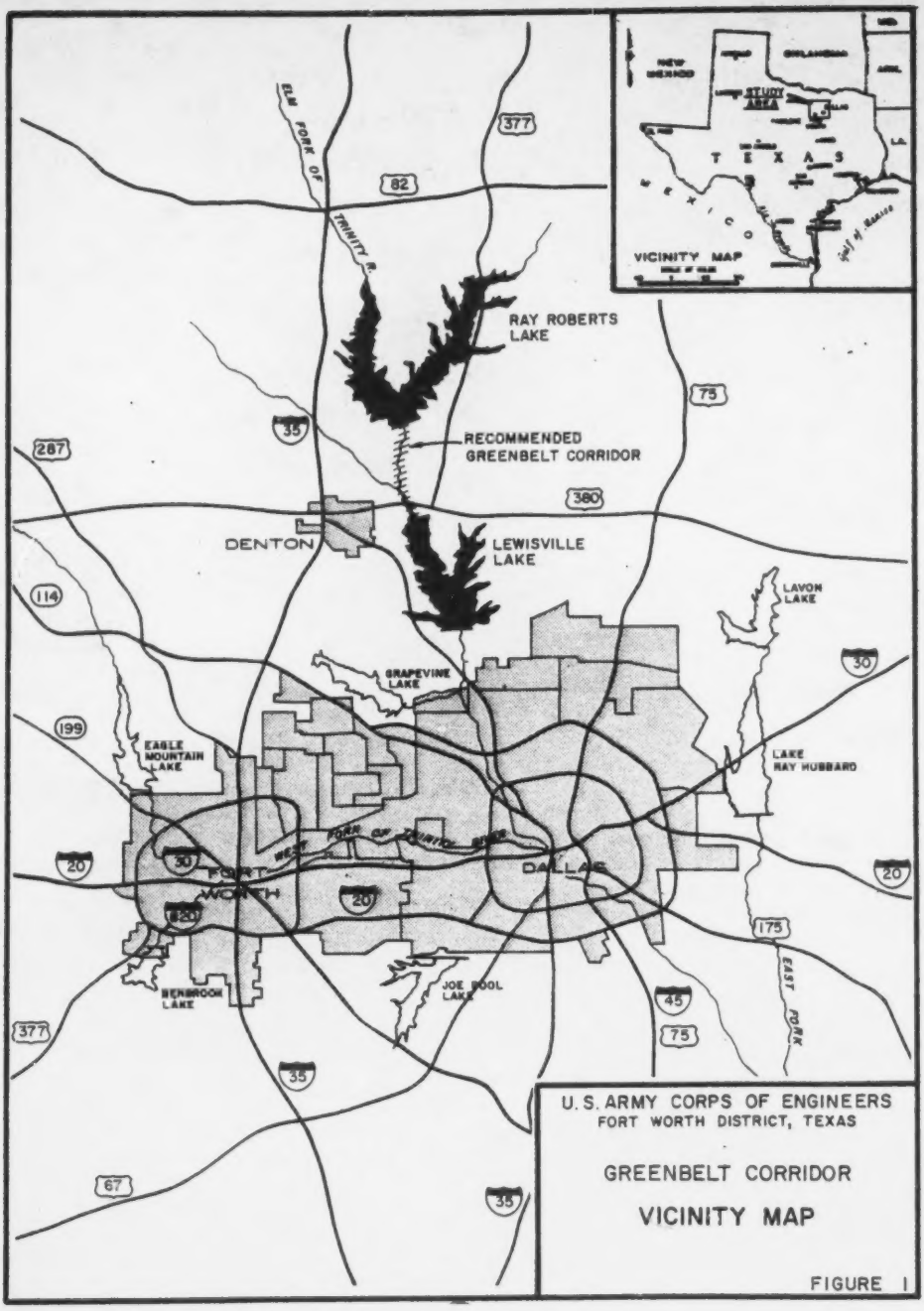
ELM FORK OF TRINITY R.
377
82
RAY ROBERTS LAKE
75
35
287
RECOMMENDED GREENBELT CORRIDOR
360
DENTON
LEWISVILLE LAKE
114
LAVON LAKE
30
GRAPEVINE LAKE
199
EAGLE MOUNTAIN LAKE
LAKE RAY HUBBARD
20
WEST FORK OF TRINITY RIVER
FORT WORTH
DALLAS
820
175
EAST FORK
JOE POOL LAKE
BENBROOK LAKE
45
377
67
VICINITY MAP
U. S. ARMY CORPS OF ENGINEERS
FORT WORTH DISTRICT, TEXAS
GREENBELT CORRIDOR
VICINITY MAP
FIGURE 1

TABLE I

HISTORY OF CONGRESSIONAL ALLOCATIONS
FOR RAY ROBERTS LAKE

FY	Preconstruction Planning	Construction
1970	$ 150,000	-
1971	40,000	-
1972	382,700	-
1973	350,000	-
1974	383,000	-
1975	-	$ 2,500,000
1976	-	300,000
1976 (TQ)	-	2,014,000
1977	-	(-1,000,000)
1978	-	600,000
1979	-	(-1,000,000)
1980	-	(- 425,000)
1981	-	5,500,000
1982	-	18,600,000
1983	-	37,700,000
1984	-	46,000,000
1985	-	46,000,000
Total	$1,305,700	$156,789,000
Grand Total FY 1985		$158,094,700

TABLE II

SCOPE OF CHANGE
FROM RAY ROBERTS LAKE AUTHORIZATION
DUE TO GREENBELT CORRIDOR
(Oct 1984 Costs)

Parameter	Last Submitted to Congress	Recommended Greenbelt	Percent Change
Land Acquisition			
Total Project	48,566 acres	50,166 acres	1/
Specific Recreation (Ray Roberts/Lewisville)	1,963 acres	3,521 acres	2/
Specific Recreation at Lewisville Only	42 acres	1,600 acres	2/
Total First Cost	$280,000,000 3/	$278,252,000	- 0.6%
Specific Recreation Cost			
Ray Roberts/Lewisville			
First Cost	$ 37,904,000 3/	$ 36,156,000	- 4.6%
Annual Charges	2,820,000	2,495,000	-12%
Lewisville only			
First Cost	4,000,000 4/	3,036,000	-24%
Annual Charges	542,600	275,850	-49%
Specific Recreation Benefits			
Ray Roberts/Lewisville	6,243,000	5,912,000	- 5%
Lewisville only 5/	1,807,100	1,476,100	-18%
Recreation Purpose B/C Ratio			
Ray Roberts/Lewisville	2.21	2.37	+ 7%
Lewisville only	3.33	5.35	+60%

Footnotes:

1/ 48,566 acres are reported in the FY 86 budget just for Ray Roberts Lake. Current real estate estimates are closer to 48,500 acres. The current estimate of project lands required for the Lewisville pool raise will be addressed in a Real Estate DM, as will any recreation lands which may ultimately be approved.

2/ HD 276 authorizes 4,200 acres for specific recreation at both Ray Roberts and Lewisville, with 2,900 acres (2,800 acres easement conversion and 100 acres fee simple) of that total for public use and access at Lewisville Lake. Budgetary data submitted to Congress since FY 75, however, is based upon 42 acres which were identified although not approved for Lewisville recreation development in the 1973 GDM. Budgetary submittal for specific recreation lands at Ray Roberts Lake are based upon 1,921 acres contained in the 1982 GDM Supplement No. 1, which have been carried in the budget since FY 84.

3/ Total First Cost and Specific Recreation Cost shown are from the FY 86 budget submittal.

4/ The last budget submittal for Lewisville recreation was $4,784,000 based on the 1973 GDM. A "facilities only" plan at Hickory Creek Park with no land acquisition and a first cost of about $4,000,000 is the probable plan of development if the recommended greenbelt is not approved. OM&R costs are estimated at $245,000 and $50,000 for "facilities only" and the greenbelt, respectively. (See EIA at attachment II for derivation of "facilities only" plan)

5/ Benefits are June 1984; Travel-Cost Method.

greenbelt, then, would consist of 1,600 acres, which is less than the 2,900 acres specifically authorized by Congress for public use and access at Lewisville Lake.

In the event that the recommended greenbelt is not authorized/approved, it is likely that land acquisition to support facilities development will not be required. Although additional park lands adjacent to the lake are desirable to support facilities development, costs may be prohibitive. The cities of Dallas and Denton are currently contractually obligated to participate in the development of approximately 160 picnic and camping units and land acquisition of 42 acres. A plan for development of Hickory Creek Park (Sycamore Bend portion) with no land acquisition is contained in the draft Lewisville Master Plan Update. If the greenbelt is not approved, the cities will be held contractually responsible for a mutually acceptable plan of development. If the greenbelt is approved, the cities' contracts will be supplemented and the Hickory Creek Park plan will be set aside for future development contingent upon securing a non-Federal cost-sharing sponsor.

The proposed conservation easements associated with the greenbelt are a nonstandard estate. The conservation easements adjacent to the corridor would assure that the rural character of the river corridor remains intact and would provide a visual buffer between the acquired lands on the river and future development. Easement provisions would allow landowners to continue existing agricultural pursuits such as pasture and row crops. Restrictions on more intensive agricultural use and on structures such as residences, barns, or outbuildings would be conditions of the conservation easements. Public use would not be permitted. Additional benefits to landowners would include certain applicable tax credits. The corridor would be fenced along the fee acquisition line, and all recreation trails, primitive campsites, access points, and boat launching facilities would be located on fee lands.

Costs and Benefits. The FY 1986 budget submitted for the Ray Roberts Lake/Lewisville Lake pool raise estimated total project costs at $280,000,000 and specific recreation costs at $37,904,000. A plan for Lewisville Lake recreation development was submitted in the 1973 GDM, but it was not approved pending development of additional alternatives. Costs of that 1973 recreation plan, including costs of 42 acres at $841,000 (1973 prices), have been carried in the budget since FY 75 due to lack of a detailed or approved alternative. The cost for recreation development at Lewisville Lake contained in the last budget submittal, therefore, is $4,748,000 including land acquisition costs. A facilities only plan for Hickory Creek Park at Lewisville Lake was developed during the analysis of feasibility of the greenbelt corridor. The facilities only plan would have a first cost of about $4,000,000 (table II) with no land acquisition, but that plan has not been submitted to nor approved by higher Corps offices. The greenbelt estimate of $3,036,000 is based upon a 1984 gross appraisal in the corridor area and development of 2 access points/canoe launching areas, 12 miles of trails, and 10 primitive camping areas.

Recreation benefits for "last submitted" recreation development are estimated at 467,634 visitor-days and $1,807,100 annually for boating, fishing, picnicking, sightseeing, swimming, camping, and other (miscellaneous) recreation activities. Estimated benefits are based on the Travel-Cost Method for the facilities only development plan of 120 campsites, 35 picnic sites, 4 group pavillions, and 1 boat ramp with 4 lanes, at Hickory Creek Park on Lewisville Lake with no land acquisition. Use of this "facilities only" plan for estimating recreation benefits at Lewisville Lake is necessitated by the lack of specificity of the authorizing document regarding quantity or location of facilities. Further, facilities numbers identified in the 1973 GDM would be prohibitively expensive at today's standards and are not compatible in terms of carrying capacity of the available land resources. Benefits of the recommended greenbelt plan are estimated at 419,707 visitor-days and $1,476,100 annually for the activities of canoeing/rafting, stream fishing, horseback riding, and hiking/walking. Benefits of the greenbelt are also calculated through the Travel-Cost Method. It should be noted that the 1985 Texas Outdoor Recreation Plan (TORP) identifies the top 10 outdoor activities projected for 1990; the first 3 are trail-oriented and account for 73 percent of the activity days for all 10 activities. Hiking/walking ranks first and alone accounts for 32.9 percent of the projected activity days.

Changes in Project Purposes

The Ray Roberts Lake/Lewisville Lake pool raise project is being constructed for the authorized purposes of water supply, recreation, and fish and wildlife. Implementation of the recommended greenbelt corridor at Lewisville Lake for the purpose of recreation would not constitute a change in project purpose.

Changes in Local Cooperation Requirements

Implementation of the greenbelt corridor would result in changes in local cooperation requirements. These changes, however, would not result in any requirement for specific language to be included in any authorizing act or in any general legislation applicable to the project.

Currently, the cities of Dallas and Denton are contractually obligated to a monetary amount of new but nonspecified recreation development at Lewisville Lake. By existing contracts with Dallas and Denton, the two cities would pay for 50 percent of the recreation development costs of new facilities at Lewisville Lake and assume all OM&R responsibilities for those facilities. The Federal Government would also assume 50 percent of the first costs consistent with the provisions of PL 89-72. With implementation of the recommended greenbelt corridor plan, the TPWD would become an additional local sponsor. The TPWD would assume 25 percent of the first costs, Dallas and Denton would assume 37.5 percent, and the Federal Government would assume 37.5 percent of the first costs. TPWD would be responsible for all OM&R of the greenbelt corridor, as well as an additional 2,400 acres of Lewisville Lake project lands upstream of Highway 380 (plate 2). Cost sharing arrange-

ments of the "authorized" recreation development at Lewisville compared to the greenbelt corridor are shown in table III.

TABLE III

COST SHARING ARRANGEMENTS FOR
LEWISVILLE RECREATION DEVELOPMENT

	Authorized Development	Greenbelt Corridor
Federal Government	50%	37.5%
Dallas	37% (74% of OM&R)	27.75%
Denton	13% (26% of OM&R)	9.75%
TPWD	-	25% (100% of OM&R)

Additionally, with the greenbelt plan, the TPWD share would be financed by the State of Texas rather than the Federal Government, resulting in further savings to the Federal Government. Regardless of which plan of recreation development at Lewisville Lake is ultimately approved, the cities of Dallas and Denton will share in the cost of relocating facilities affected by the pool raise as a joint project cost. A draft recreation contract with the TPWD (including TPWD involvement at Ray Roberts Lake) and draft supplemental recreation contracts with Dallas and Denton, which include the greenbelt plan cost shared as described, have been concurred in by the local sponsors. These draft contracts have been submitted for review by higher Corps authority.

Change in Location of Project

House document 276 states:

> "...about 2,900 acres of which about 2,800 acres would be required in fee title in lieu of existing flood flowage easements and 100 acres in fee title above the upper guide contour, to meet requirements for public use at the modified Garza-Little Elm (Lewisville) Reservoir. Lands thus obtained should be blocked out in accordance with sound real estate practices, giving due consideration to specific recreation and public access needs in each area."

Although a greenbelt corridor connecting the two lakes is not specifically mentioned in HD 276, the document does not state where those lands are to be acquired nor does it account for the intensive residential development that has occurred adjacent to the lake since authorization and subsequent increases in real estate prices. With water supply releases from Ray Roberts Dam into Lewisville Lake, which will be more than 130 cfs for 98 percent of the time, a greater demand for public use of and access to the stream corridor (with relatively lower real estate prices) is created by the project. The House Document does provide a "typical" recreation area development-layout plan which indicates more intensive facilities development than is planned for the greenbelt

corridor. That "typical" plan, however, does not consider public access opportunities of a two-lake system.

Design Changes

There are no project related design changes associated with implementation of the recommended greenbelt corridor.

Changes in Total Project Costs

Table IV presents a comparison of the estimated costs of the project as authorized by Congress and updated to current price levels, the project last presented to Congress, and the project being recommended which includes the greenbelt corridor.

TABLE IV

CHANGES IN TOTAL PROJECT COSTS
(3¼ percent interest for 100 years)

	Authorized by Congress (1962)	Updated for Current Prices (Oct 84)	Last Submitted to Congress (Oct 84)	Project Being Recommended (Oct 84)
First Cost	$34,073,000	$212,993,000	$280,000,000	$278,252,000
OM&R	509,000	2,418,000	1,484,400	1,289,400
Annual Charges	1,662,000	9,625,700	11,892,500	11,560,300

The project authorized by Congress in 1965 included 1962 cost estimates for a 25,200 acre conservation pool (37,300 acre guide take) at Ray Roberts Lake and for a 7 foot raise in pool elevation at Lewisville Lake. Figures displayed in the second column of table IV represent an update of that originally authorized plan with an ENR construction index of 4.75 and current real estate prices. In 1974 a supplement to the GDM (Supplemental Information Report) was approved. That supplement to the GDM provided for a 5.5 foot raise in the Ray Roberts pool elevation causing an increase in pool elevation from 25,200 acres (627.0 feet msl) to 29,350 acres (632.5 feet msl). Additional cost for lands and construction due to the Supplemental Information Report in 1974 was $24,000,000. When updated to current levels for ENR construction index (1.99) and real estate values, costs associated with the Ray Roberts Lake pool raise become $43,600,000. The updated estimated cost of the authorized project just for current prices, therefore, is $256,593,000 ($212,993,000 plus $43,600,000).

The remainder of the difference between the updated project authorized by Congress and the budget last submitted to Congress (a difference of $23,407,000) is due to numerous factors. Factors other than normal inflation associated with that difference include increased numbers of relocations, increased relocation costs, increased design criteria and standards (structural and recreation), and joint acquisition of key flowage easement lands for fish and wildlife purposes.

The difference in the budget last submitted to Congress and the plan recommended in this report is a decrease of $1,748,000. That difference is based upon a $4,784,000 estimate for Lewisville recreation facilities contained in the FY 86 budget request and the $3,036,000 estimated first cost of the greenbelt corridor. Additionally, there would be a savings of $195,000 in annual OM&R costs to the local sponsor with the recommended greenbelt plan.

Operation and maintenance costs to the Federal Government at Lewisville Lake should not be significantly affected by the recommendation. Foregone development of new traditional facilities for the immediate future will place some additional pressure on existing facilities. These increased maintenance costs, however, should be more than offset by wise and efficient relocation of facilities affected by the pool raise and relocation of facilities under the park closure program. The development of Lewisville State Park and management of an additional 2,400 acres of Lewisville project lands associated with the greenbelt by the TPWD will also help to offset any increased Federal O&M costs on existing facilities.

Changes in Project Benefits

Table V presents a comparison in estimated project benefits between the authorizing document, the last budget submittal, and the recommended greenbelt plan.

TABLE V

CHANGES IN PROJECT BENEFITS

	Authorized by Congress (1962)	Last Submitted to Congress (Oct 84)	Project Being Recommended (Oct 84)
Water Supply	$1,085,000	$15,089,300	$15,089,300
Recreation	1,500,000	5,501,000	5,170,000
Fish and Wildlife	1,400,000	741,600	741,600
Total Project	3,985,000	21,331,900	21,000,900

Benefits for fish and wildlife as reported in the authorizing document were reduced to $741,600 in the 1973 GDM due to recomputation of man-day use of fish and wildlife resources with and without project. The 1974 supplement to the GDM reports recreation benefits to be $6,168,000 and fish and wildlife benefits to be $741,600. However, the $5,501,000 and $741,600 values reported in the 1973 GDM have been carried in the budget submittals without change since 1973. The supplement to the GDM reports water supply benefits at $7,289,700, and that figure is included in the 1975 budget. Water supply benefits have been updated in subsequent budget submittals based upon market area demand so that the estimate for FY 86 is $15,089,300.

An update of recreation benefits for new Lewisville Lake recreation development was made in the 1984 analysis of the greenbelt corridor. That analysis assumed facilities development at Hickory Creek Park (120 campsites, 35 picnic sites, 4 group shelters, and 4 boat launching lanes with no land acquisition) to be the without greenbelt or "authorized" recreation development at Lewisville Lake. Recreation benefits for that plan were estimated at $1,807,100 annually (see table II). Greenbelt benefits were estimated at $1,476,100 or $331,000 less than the Hickory Creek plan. It should be noted that the benefits calculated for the greenbelt corridor are those which will occur as a result of public access and maintenance and do not include the limited use of the stream corridor which would occur in the absence of a greenbelt proposal. Table V, therefore, presents recreation benefits of the project being recommended at $331,000 less than those last submitted to Congress.

Benefit-Cost Ratio

The benefit-to-cost (B/C) ratio of the overall authorized project at current price levels is 2.12 at the authorized (HD 276) interest rate of 2-7/8 percent and 1.50 at the current interest rate of 8-3/8 percent. The overall project with the recommended greenbelt has a B/C ratio of 2.19 at the 2-7/8 percent authorized interest rate and 1.50 at the current 8-3/8 percent rate. At the 3¼ percent interest rate approved for economic analysis purposes, the authorized project at current prices has a B/C ratio of 1.79, and the recommended project has a B/C ratio of 1.82. Water supply and recreation contracts were signed with the cities of Dallas and Denton in September 1980 with a reimbursement interest rate of 7.21 percent. The Recreation Purpose B/C ratios at Lewisville Lake shown on table II for "last submitted" recreation and for the recommended greenbelt are based on that 7.21 percent reimbursement rate.

Changes in Cost Allocation

Cost allocations by project purposes for the authorized project and for the recommended project are displayed in table VI.

TABLE VI

COST ALLOCATIONS

Purpose	Authorized Project		Recommended Project	
	Oct 84 Prices	Percent	Oct 84 Prices	Percent
Water Supply	$161,556,000	58	$161,556,000	58
Recreation and Fish and Wildlife	101,122,000	36	99,374,000	36
Nonallocable Costs	17,322,000	6	17,322,000	6
Total	$280,000,000	100	$278,252,000	100

Changes in Cost Apportionment

Table VII provides a delineation of Federal and non-Federal costs associated with the authorized and recommended projects.

TABLE VII

APPORTIONMENT OF COSTS

	Costs (Oct 84)		Percent	
	Federal	Non-Federal	Federal	Non-Federal
Authorized Project				
Water Supply	-	$161,556,000	-	58
Recreation/F&W	$82,170,000	18,952,000	29	7
Nonallocable	17,322,000	-	6	-
Total	$99,492,000	$180,508,000	35	65
Recommended Project				
Water Supply	-	$161,556,000	-	58
Recreation/F&W	$81,514,000	17,860,000	29	7
Nonallocable	17,322,000	-	6	-
Total	$98,836,000	$179,416,000	35	65

Environmental Considerations in Recommended Changes

A Final EIS on the Ray Roberts Lake/Lewisville Lake pool raise project was filed with CEQ on 4 March 1974. A Final Supplemental EIS on the Ray Roberts Lake pool raise was filed with CEQ on 7 February 1975. In September 1980, the cities of Dallas and Denton entered into contractual agreements with the Government for cost sharing on the Ray Roberts/ Lewisville pool raise project.

The greenbelt corridor between the lakes had been addressed as a recreation/fish and wildlife alternative in the 1974 supplement to the GDM. In 1975, both the TPWD and the U.S. Fish and Wildlife Service (USFWS) endorsed the greenbelt concept as a preferred type of recreation development. In 1976, the TPWD expressed an interest in cost-sharing in a greenbelt between the lakes and requested that the Fort Worth District analyze its feasibility for the purposes of hiking, horseback riding, canoeing, primitive camping, nature study, stream fishing, and other recreation pursuits. Due to the question of authority and due to water rights disputes between the cities of Dallas and Denton, the proposal was not analyzed any further at that time. In January 1983, the city of Dallas requested that the Fort Worth District analyze the potential for a greenbelt corridor to be substituted for recreation facilities development at Lewisville Lake for which the cities of Dallas and Denton are contractually obligated (attachment I).

The proposed greenbelt corridor is located in an undeveloped area close to and readily accessible from a large metropolitan area. It

would connect two large blocks of public land and provide public access to a significant portion of the Elm Fork of the Trinity River. The Elm Fork of the Trinity River is identified as a potential trail resource both in the TORP and in Texas Trailways, A Feasibility Report of a System of Trails in Texas. Texas Trailways states that "The flood plain of the Elm Fork could provide sufficient resources for the development of a quality recreational trail." The TORP identifies stream corridors, in general, as a highest resource priority. The TORP states that "A Trinity River greenbelt would be one such regional recreation area which has the potential for meeting the needs for hike and bike trails, passive recreation, and other regional needs." The report "Natural Areas of Texas" identifies the flood plain of the Elm Fork between the two lakes as a significant regional resource.

Although some of the flood plain in this reach is pasture or cropland, there is an almost continuous corridor of riparian woods. These woodlands are mostly mature, but some areas are in various successional stages. Predominate overstory species include American and cedar/elm, hackberry, pecan, and Burr and Shumard oak. Throughout much of the stream reach a dense canopy or partial canopy is formed over the stream.

The stream in this reach under existing conditions provides a quality fishery and during moderate flows is suitable for canoeing. Reservoir routings performed by the city of Dallas on its proposed water supply release plan indicate that for about 98 percent of the time releases from Ray Roberts Dam will be at least 130 cfs. In addition, in coordination with the USFWS the cities of Dallas and Denton have formally agreed, by Memorandum of Agreement, to maintain continuous minimum discharges.

The guaranteed releases from Ray Roberts Lake during the first half of the year will be adequate for canoeing (marginal during drier months) but should provide more than sufficient survival habitat for maintenance of a quality stream fishery. This is especially true considering the diverse substrates and riffle and pool complexes through the stream reach. The proposed water supply/hydropower releases (130 cfs and greater) by Dallas and Denton, however, should provide an excellent stream fishery and canoeing experience. Lack of public access to the stream and particularly its adjacent riparian corridor limits the area's recreation potential at present and after construction of Ray Roberts Lake is complete.

Significant demand for such types of low density recreation as hiking, nature study, canoeing, horseback riding, and primitive camping exists throughout Texas in general and the Dallas/Fort Worth metroplex in particular. Interest in these types of activities is indicated by a number of sources. The TORP states that:

> "In the greater Dallas/Fort Worth metropolitan area, securing large tracts of land for present and future needs is a tremen-

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dous problem. The need for large regional parks, open space, and natural areas in, or close to, the metropolitan area is a high priority."

Significant demands also exist in the North Central Texas area for both stream oriented and more traditional type recreation development. Table VIII summarizes demands and facilities needs as identified in the TORP for Region 4. A more detailed discussion of recreation needs and benefits is contained in the Environmental Impact Assessment (Attachment II).

TABLE VIII

PROJECTED RECREATION DEMANDS
AND FACILITY NEEDS

	1990	
	Demands (Visitor Days)	Facilities Needs
Boating	1,165,307	34 lanes
Canoeing*	386,500	1,340 stream miles
Fishing	3,014,260	6 lanes
Stream Fishing*	1,491,500	11.4 stream miles
Picnicking	1,452,749	676 units
Sightseeing	1,025,470	-
Skiing	590,422	17 lanes
Swimming	792,409	15.5 acres
Camping	574,885	998 units
Horseback riding*	2,700,500	38 trail miles
Hiking*	1,444,000	144 trail miles
"Other"	334,055	-

Notes: Values are taken from the draft 1985 Texas Outdoor Recreation Plan for Region 4. Asterisks denote stream or linear type recreation and values are interpolated between 1985 and 1995 projections. All facilities needs assume Lewisville Lake State Park (currently under construction) to be in-place.

In a survey conducted by the TPWD during the public involvement process for the development of recreational facilities at Ray Roberts Lake, 74.2 percent of the respondents indicated that hiking trails are desirable. Additionally, 64.5 percent responded that primitive campsites are desirable, and 45.2 percent indicated that horseback riding trails are desirable.

With Ray Roberts Lake in place and without implementation of the greenbelt it is probable that much of the present flood plain area outside the designated Federal Emergency Management Agency (FEMA) floodway

will be developed for second homes or retirement homes. Clearing of riparian forest lands for agriculture, waste disposal, residential and urban development, channelizations, and inundation through impoundments throughout the State compound the area's importance as a remaining natural riparian system in proximity to an expanding urban population. Without the recommended plan, this resource would be lost or much altered due to flood protection provided by Ray Roberts Lake, and the opportunity for its conservation would be forgone. There could also be an induced potential for catastrophic loss due to flood plain development below Ray Roberts Dam.

With implementation of the greenbelt corridor by Dallas, Denton, the TPWD, and the Corps of Engineers, preservation of this stretch of the Elm Fork flood plain would be insured. Through time, with public ownership, the present habitat and esthetic values of the riparian woodlands of pecan, elm, and oak would increase as cut-over areas mature and succession occurs on old fields. Public ownership would also help to assure water quality protection. Minimum recreation facility development associated with the corridor will provide for a substantial portion of the study area's needs for open space, hiking and equestrian trails, primitive camping, nature study, canoeing, tubing, rafting, and stream fishing. These needs are projected to become even more acute in the future as the urban population of the metroplex continues to increase. Operation and maintenance of the greenbelt and an additional 2,400 acres of Lewisville project lands by the TPWD will place a financial burden upon the State of Texas but will insure management for best use for both recreation and natural resource values. Management by TPWD will also relieve the Corps of Engineers of management responsibilities on all Lewisville project lands (2,400 acres) upstream of Highway 380. That 2,400 acres of project lands north of Hwy 380 is currently managed by the Corps of Engineers for low density recreation and waterfowl. The TPWD would manage these lands for the same purposes in conjunction with the greenbelt.

Development of the "greenbelt only" plan does not preclude development of new recreation facilities on Lewisville Lake. The recreation development plan for Hickory Creek Park is included in the update of the Master Plan for Lewisville Lake as a future development plan. However, a new recreation sponsor would be required for cost sharing in any facilities before they would be constructed. As a result, the adverse impacts of the greenbelt include temporarily forgone benefits attributable to more traditional lake recreation. It should be noted, however, that as the Metroplex grows in the direction of Ray Roberts and Lewisville Lake, the likelihood of a recreation cost-sharing sponsor will increase. Examples are the fact that TPWD is currently developing Lewisville State Park and The Colony has recently entered into a lease for golf course development in Wynnewood Park and facilities development in Stewart's Creek Park. In the event that the recommended greenbelt is not approved by reviewing Corps officials, Dallas and Denton would share in development of Hickory Creek Park (Sycamore Bend), and the greenbelt benefits would be forgone.

An EIA was prepared (Attachment II) based upon these environmental considerations, project economics discussed on preceding pages, and the extensive public involvement described in the following paragraphs. A Finding of No Significant Impact (FONSI) for implementation of the greenbelt was signed by the District Engineer on 10 January 1985. Supplemental agreements to the contracts with Dallas and Denton and a recreation contract with the TPWD, including cost sharing on the recommended greenbelt corridor, have been prepared. All three local sponsors have concurred in the provisions of these contracts (attachment I), and the draft contracts have been forwarded to higher Corps offices for review.

Public Involvement

Since the study was initiated at the request of the city of Dallas in January 1983, there have been numerous meetings with Federal and State government agencies, local governments, councils of government, and staff presentations to environmental organizations and the general public. One meeting was held in Aubrey, Texas, at the request of area landowners. A public meeting and a public workshop were held, again in Aubrey, to obtain public comments on the initial greenbelt proposal and to obtain input on alternatives, respectively. A total of seven public notices were issued to a mailing list of over 300 individuals, organizations, and agencies.

Public notice of the Fort Worth District recommendation of the greenbelt corridor (1,860 acres in fee acquisition rather than the current 1,100 acres fee and 500 acres easement) was first issued on 26 July 1983. On 18 August 1983, Corps staff met with project area residents in Aubrey, Texas, to hear their views on the original proposal. Notice of a 26 September 1983 public meeting was issued on 3 September 1983. On 15 September 1983, a public notice was issued which announced that study of the proposal would be continued. An announce-ment of a public workshop to discuss alternatives was made on 15 March 1984, with the workshop held on 3 April 1984. On 13 April 1984, an information paper was released which provided the results of the workshop to all interested parties. During the analysis of feasibility, many telephone and written comments were received (and considered) from landowners, environmental groups and individuals, and other interested parties. Throughout the public involvement process, strong support was expressed by numerous large environmental groups, and strong opposition was expressed by many landowners in the area. Much interest was expressed on both sides of the issue.

. A final public notice dated 13 November 1984, of the recommended plan described in the EIA and this report was sent to a mailing list of over 300 individuals, agencies, and organizations. A total of 76 comments were received in response to that notice. Opposition to the proposal was expressed in 26 of the comments received. Among the objections were letters from real estate companies, lawyers, several

landowners, and eight copies of a form letter. Also objecting to the proposal was the Aubrey Independent School District. Support for the proposal was expressed in 50 of the letters received. Although the majority were from individuals, continued support was expressed by the Texas Conservation Foundation, Texas Committee on Natural Resources, Fort Worth Audubon Society, Lone Star Chapter of the Sierra Club, and USFWS. Several comments in support of the proposal were received from affected landowners. Considering all comments received and the continued strong support of the project sponsors, Dallas, Denton, and the TPWD, it was determined that additional public meetings would not be cost effective or add to the decision making process.

History of the Project

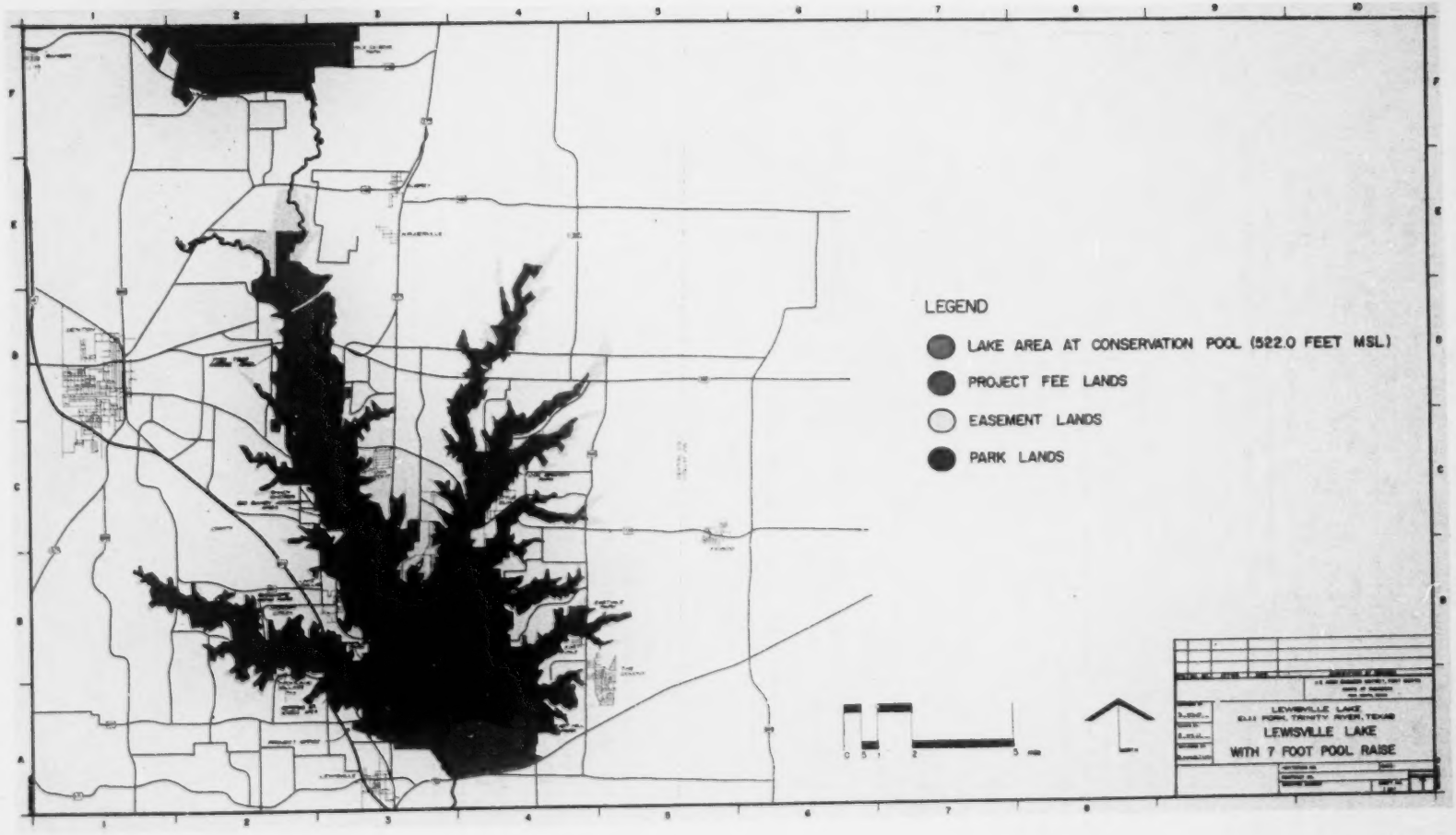
Recreation development at Lewisville Lake under the Ray Roberts Lake authorization has been addressed in HD 276, the 1973 GDM, the 1974 supplement to the GDM, the Final EIS of 1974, Final Supplemental EIS of 1975, and the Greenbelt EIA and FONSI as previously discussed. In addition to these documents, a recreation Master Plan for Ray Roberts Lake and a Supplement to the Master Plan for Ray Roberts Lake have been approved (both in September 1983).

The Supplemental Master Plan, in addition to addressing park changes at Isle duBois Park and fish and wildlife enhancement measures on Ray Roberts Lake, also proposed the greenbelt in lieu of new facilities development at Lewisville Lake. The greenbelt proposal contained in the Supplement to the Ray Roberts Master Plan was not approved for the following reasons.

- The rationale presented was inadequate to demonstrate that the greenbelt would better serve the needs of the public; and

- There appeared to be a lack of authority to participate in the greenbelt because the scope of the project authorization may not be broad enough to include this type of development.

Southwestern Division's indorsement of the Supplemental Ray Roberts Master Plan did, however, allow the District to undertake additional analyses and provide rationale in support of the proposal. As a result of SWD's review comments and continued strong support of the local sponsors for the greenbelt, the District's analysis and public involvement were continued. That continued analysis led to the FONSI and to the District interpretation that the greenbelt proposal is within the discretionary authority delegated to the Corps of Engineers. Such findings were provided to SWD in letters dated 22 January and 1 March 1985. After review of the District's recommendation, by letter dated 4 April 1985, the Division Engineer directed the preparation of this Postauthorization Change Notification Report.


LEGEND
LAKE AREA AT CONSERVATION POOL (522.0 FEET MSL)
PROJECT FEE LANDS
EASEMENT LANDS
PARK LANDS
LEWISVILLE LAKE
WITH 7 FOOT POOL RAISE

OVERSIZE FOLDOUT(S) FOUND HERE IN THE PRINTED EDITION OF THIS VOLUME ARE FOUND FOLLOWING THE LAST PAGE OF TEXT IN THIS MICROFICHE EDITION.

SEE FOLDOUT NO 1

DEPARTMENT OF THE ARMY
SOUTHWESTERN DIVISION, CORPS OF ENGINEERS
1114 COMMERCE STREET
DALLAS, TEXAS 75242-0216

REPLY TO ATTENTION OF:
SWDPL-R

4 APR 1985

SUBJECT: Greenbelt Corridor Between Ray Roberts Dam and Lewisville Lake

Commander, Fort Worth District
ATTN: SWFPL-R

1. Reference is made to SWFPL-R letters of 22 January and 1 March 1985, and enclosures; SAB.

2. After extensive review of the information provided by the referenced letters, and to the applicable guidance, I have decided that the appropriate action is to forward a Post Authorization Change (PAC) Notification Report to OCE, recommending approval of the Greenbelt plan. Accordingly, you should prepare and forward a (PAC) Notification Report to this office as soon as practicable.

3. If you have questions, you should contact Harold Green, SWDPL-R, 729-2305.

Robert J. Dacey
ROBERT J. DACEY
Brigadier General, USA
Commanding

ATTACHMENT I

PERTINENT CORRESPONDENCE

PARKS AND WILDLIFE DEPARTMENT

COMMISSIONERS
ARCE JOHNSON
Chairman, Austin
E.K. FULTON
Vice-Chairman, Lubbock
CK R. STONE
Rolls
COMMISSIONERS
BOB BURLESON
Temple
JOHN M. GREEN
Beaumont
LOUIS H. STUMBERG
San Antonio

CLAYTON T. GARRISON
EXECUTIVE DIRECTOR

JOHN H. REAGAN BUILDING
AUSTIN, TEXAS 78701

October 9, 1975

Colonel Joe W. Sheard
District Engineer
U. S. Army Corps of Engineers
Fort Worth District
P. O. Box 17300
Fort Worth, Texas 76102

Dear Colonel Sheard:

In conjunction with our proposed participation in the Aubrey Lake project through the acquisition, development, and operation of the Isle du Bois park site, the Department would like to investigate the possibilities of providing stream-related recreational opportunities below the dam.

Based on a preliminary analysis of the Elm Fork resource and the predicted recreation resource requirements for this State Park Planning Region, we feel this area has the potential to provide needed recreational opportunities which would complement those provided on the reservoir. Specifically, such activities could include hiking, bicycling, canoeing, primitive camping and picnicking, nature study, and stream fishing. Also, this area would connect two large Federal projects with a continuous corridor of public land, which could afford additional benefits.

We noted that the concept of acquiring this downstream area of less than 2,000 acres and making it available to the Department as a natural area and for recreational uses was presented in the Fish and Wildlife Service's final report of May 14, 1975, and supported in a letter from the Regional Director of the Bureau of Outdoor Recreation. Apparently the concept originated with the observation that occasional releases of flood waters from Aubrey Lake could necessitate overbank flooding of the downstream channel, thereby creating the need to obtain flowage easements on the aforementioned land. This being the case, an excellent opportunity to provide for public recreational uses exists by converting the easements

to fee simple title through a cost-sharing agreement with a non-Federal entity. It is the primary purpose of this letter to ascertain the Corps' position on cooperating to provide such a public use area, and on the provision of 50% matching funds for acquisition and development of the site.

I would like to stress that this letter does not constitute a specific offer to cost-share on land below the Aubrey damsite. Rather, we are attempting to obtain all relevant information on the subject so that we can discuss the concept with our Commission and obtain their guidance and direction.

Your assistance in this matter is appreciated.

Sincerely,

CLAYTON T. GARRISON
Executive Director

CTG:RW:sh

cc: Mr. Henry Graiser, Director
Dallas Water Utilities Dept.
500 South Ervay
Dallas, Texas 75201

cc: Mr. W. O. Nelson, Jr.
Regional Director
U. S. Fish and Wildlife Service
P. O. Box 1306
Albuquerque, New Mexico 87103

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January 30, 1976

Colonel Joe H. Sheard
District Engineer
U. S. Army Corps of Engineers
Fort Worth District
P. O. Box 17300
Fort Worth, Texas 76102

Dear Colonel Sheard:

This is in reference to your letter of December 1, 1975, concerning the potential recreational corridor below proposed Aubrey Lake on the Elm Fork of the Trinity River.

Based on your response, I assume that the next step to take is to conduct a study of this recreational corridor concept to determine its feasibility for acquisition and management for recreational purposes in conjunction with the Aubrey Lake project, and to ascertain its possible eligibility for cost sharing under an appropriate Corps of Engineers program. Therefore, I would like to request that a special study of the Elm Fork resource be conducted by the Corps of Engineers for the above purposes.

My staff will be available as needed to provide assistance and support to the study effort. We look forward to discussing this matter further with you at your convenience.

Sincerely,

CLAYTON T. GARRISON
Executive Director

CTG:RW:sh

cc: Mr. Henry Graiser, Director
Dallas Water Utilities Dept.
cc: Mr. W. O. Nelson, Jr.
U. S. Fish and Wildlife Service

dallas water utilities
City Hall • Dallas, Texas 75277 • (214)670-3011

January 28, 1983

Colonel Theodore G. Stroup
District Engineer
U. S. Army Corps of Engineers
P. O. Box 17300
Fort Worth, Texas 76102

Dear Colonel Stroup:

At the December 7, 1982 meeting between Denton, Dallas, the Corps and Texas Parks and Wildlife Department, a discussion was held regarding the stretch of land between Ray Roberts Lake and Lewisville Lake as having excellent recreational value as a greenbelt park. Since the City of Dallas is a local sponsor in the Ray Roberts Lake Project, Dallas would be interested in your determining if this greenbelt has the potential to be a park and request that you and your staff investigate this matter further..

Dallas' interest in this potential park is two-fold. First, if the potential greenbelt park does prove to be feasible, can the greenbelt park be substituted for the recreational development Dallas is committed to at Lewisville Lake? Second, should the park prove to have greater recreational benefits than are required by Dallas' Lewisville Lake Park requirements, can these excess benefits be credited to the Ray Roberts Lake Project and thereby reduce the magnitude of recreational development required at Ray Roberts? Dallas requests that these questions be addressed by your staff during their investigation of the potential greenbelt park.

If upon conclusion of your investigation, the greenbelt park does prove to be of the recreational value expressed by Dallas, I am confident that Dallas would be interested in pursuing this matter further, as would the City of Denton and the Texas Parks and Wildlife Department.

Thank you for your continued cooperation on the Ray Roberts Project. If you have any questions regarding this request or need further guidance, please feel free to contact me at (214) 670-3144.

Sincerely

Thomas E. Taylor
Director
Dallas Water Utilities

11

c: Jack Robinson, Director
Dallas Parks and Recreation Department

Bob Nelson, Director
Utilities Department
City of Denton

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Dallas

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Houston

March 4, 1983

Colonel Theodore G. Stroup
District Engineer, Fort Worth District
U. S. Army Corps of Engineers
P. O. Box 17300
Fort Worth, Texas 76102

Dear Colonel Stroup:

Several items have come to my attention since our meeting on December 7, 1982, in Fort Worth. First, I would like some clarification concerning Dallas' and Denton's responsibilities on Lake Lewisville and the possibility of transfering these responsibilities to the downstream corridor below Ray Roberts Lake. More specifically, I am interested in the monetary extent of these responsibilities and what action is necessary to initiate such a transfer. I would also like to request the Corps' cooperation in obtaining real estate segment maps for the Elm Fork of the Trinity between Ray Roberts and Lewisville Lakes.

My staff has also briefed me on a meeting held January 5, 1983, at the State Department of Highways and Public Transportation District Office in Dallas, concerning the possibility of modifying the relocated Highway 455 to accommodate an underpass to connect the Isle du Bois unit with the downstream access area. As I understand it, the Highway Department can make the modification at this point in the planning process with little difficulty, and at a total estimated cost of approximately $250,000. However, it now seems that because of some funding problems, the Corps will not authorize the inclusion of this underpass in the initial road construction. Instead, the Corps recommends that we wait until the road is under construction or possibly complete, and then ask the Highway Department to construct the underpass. I feel that this is not the most efficient method of implementation and will undoubtedly result in a higher cost. The downstream access area will be an important aspect of the recreational portion of the Ray Roberts project, and the Parks and Wildlife Department is willing to consider extending its cost sharing interest to include the access area below the embankment and the necessary Highway 455 underpass modifications. I am, therefore, requesting the Corps to reconsider all funding possibilities for the Highway 455 underpass so that it might be included in the initial plans for the road.

Your prompt consideration of this request is necessary in order to meet the Highway Department's time schedule.

Sincerely,

Charles D. Travis
Executive Director

CDT:MWH:mk

dallas water utilities
City Hall • Dallas, Texas 75277 • (214)670-3011

November 30, 1984

Colonel Theodore G. Stroup
District Engineer - Ft. Worth
U.S. Army Corps of Engineers
P. O. Box 17300
Ft. Worth, TX 76102-0300

Dear Colonel Stroup:

My staff has reviewed the following documents: the November 19th draft Supplemental Agreement to the Ray Roberts and Lewisville Lakes Recreation Cost Sharing Contract between the City of Dallas and the Federal Government; the draft Supplemental Agreement between the City of Denton and the Federal Government; and the draft Cost Sharing Agreement between the Federal Government and the State of Texas for recreation development and management at the Ray Roberts project. We are in concurrence with these three documents.

One correction should be made to the Denton supplement (DACW64-80-C-0107). In the first paragraph, the City of Dallas is identified as the contracting party. This should identify the City of Denton as the contracting party.

Let me express my appreciation to you and your staff for the timely preparation of these supplements following the issuance of public notice of your decision on the Greenbelt issue. As you are aware, the City of Dallas, as all parties involved, is interested in getting the Texas Parks and Wildlife Department under contract as soon as possible. Your continued efforts in the quick and successful resolution of this matter is appreciated.

Sincerely,

Thomas E. Taylor, Director
Dallas Water Utilities

LM/dc/0911A

xc: Bob Nelson
Director of Utilities
City of Denton

CITY of DENTON, TEXAS MUNICIPAL BUILDING / DENTON, TEXAS 76201 / TELEPHONE (817) 566-8200

January 17, 1985

Col. Theodore Stroup
Department of the Army
Forth Worth District Corps of Engineers
P.O. Box 17300
Ft. Worth, TX 76102-0300

Dear Col. Stroup:

The Denton City Council, at its meeting of January 8, 1985, approved the Agreement identified as the Supplemental Agreement for Recreation Contract of Ray Roberts Lake (Modification P0001) to Contract Number DACW63-80-C-0107. We are enclosing three copies of this agreement. Please note the correction in the contract stating "Denton", rather than "Dallas".

On behalf of the Denton City Council and all of the residents of Denton, I want to express our sincerest appreciation for your help, cooperation and leadership and that of your staff in making Ray Roberts an excellent project for the future of North Texas.

Sincerely,

R. E. Nelson, P.E.
Director of Utilities

PS Please return two copies for filing with the City Secretary.

cc: Charlotte Allen, City Secretary
C. David Ham, Assistant Dir. of Wtr/WW Utilities
File

Enclosures:

Supplemental Agreement for Recreation Contract of Ray Roberts Lake (Modification P0001) to Contract Number DACW63-80-C-0107.

gcr
3403U:8

TEXAS
PARKS AND WILDLIFE DEPARTMENT
4200 Smith School Road, Austin, Texas 78744

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Laredo

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Houston

February 28, 1985

Lt. Col. Stephenson W. Page
Acting District Engineer
Department of the Army
Ft. Worth District, Corps of Engineers
P.O. Box 17300
Ft. Worth, Texas 76102-0300

Dear Colonel Page:

In reply to Colonel Stroup's letter of November 19, 1985, the Department has reviewed the draft recreation cost sharing contract, and suggests the changes enumerated on Attachment A. It should also be noted that the cost sharing figures shown on pages A-1 and A-2, do not reflect anticipated actual expenditures. With the exception of these changes, I feel the Department can concur with the general principles of the contract. However, final Department approval of specific provisions within the contract and attached exhibits is contingent upon review by the Parks and Wildlife Commission, the Texas Attorney General's Office and the U.S. Fish and Wildlife Service Division of Federal Aid.

Sincerely,

Charles D. Travis
Executive Director

CDT:MH:sf

ATTACHMENT II

ENVIRONMENTAL IMPACT ASSESSMENT

FINDING OF NO SIGNIFICANT IMPACT
GREENBELT CORRIDOR BETWEEN RAY ROBERTS DAM AND LEWISVILLE LAKE

The Fort Worth District proposes initial development of a greenbelt corridor between Ray Roberts Dam and Lewisville Lake with future development of new conventional lake recreation facilities at Lewisville Lake (Hickory Creek Park). The corridor would include 8 river miles along the Elm Fork of the Trinity River and would involve fee and conservation easement acquisition or flowage easement conversion of 1,600 acres of mostly bottomland hardwoods. A study of the feasibility of this proposal was initiated in January 1983 at the request of the city of Dallas.

House Document 276, the authorizing document for the Ray Roberts Lake project (now under construction) includes a pool raise of 7 feet at Lewisville Lake for tandem water supply and flood control purposes. It also provides for relocation of affected existing recreation facilities, acquisition of 2,900 acres of public use lands and new facility development. Development of the new facilities at Lewisville would be forgone for the present time with development of the greenbelt corridor. Options will remain open, and a plan for future development provided, for new lake recreation facilities in Hickory Creek Park. The recommended greenbelt will assure the preservation of habitat and esthetic values of the riparian ecosystem between the reservoirs which otherwise would be lost or degraded due to flood protection afforded by Ray Roberts Dam. Such riparian systems have been identified as significant and diminishing resources both locally and regionally. Recreation potential of the corridor is enhanced by water supply/hydropower releases from Ray Roberts Lake which are proposed by Dallas and Denton. Recreation development associated with the greenbelt would be minimal, consisting of canoe/jon boat launching facilities, trail systems, and primitive camping areas.

The proposed action will have a lower first cost, lower O&M costs, one additional local sponsor (Texas Park and Wildlife Department), equivalent economic benefits, and a higher benefit-to-cost ratio, at 5.35 to 1.0, than lake recreation development or a combination of the two. Additionally, a portion of the first costs will be financed by the State. The most appropriate management entity, the Texas Parks and Wildlife Department, will assume all operation, maintenance, and replacement costs of the greenbelt corridor as well as approximately 2,400 acres of existing project lands at Lewisville Lake. This involvement by the State is contingent upon approval by the Texas Parks and Wildlife Commission.

Based on the Environmental Impact Assessment and results of coordination, I have determined that development of the greenbelt corridor with a plan for future recreation facilities development at Lewisville Lake is in the public interest. The proposed action is consistent with Corps recreation resource goals of resource protection, quality recreation experiences, and efficient an cost effective management. I have further determined that the proposed action will not have a significant adverse effect on the natural or manmade environment, nor will it constitute a major Federal action of sufficient magnitude to warrant preparation of an Environmental Impact Statement. This proposal will require review and approval by higher Corps authority.

10 JAN 1985

DATE

THEODORE G. STROUP
Colonel, CE
District Engineer

ENVIRONMENTAL IMPACT ASSESSMENT

GREENBELT CORRIDOR
BETWEEN
RAY ROBERTS DAM AND
LEWISVILLE LAKE

January 1985

PREPARED BY
FORT WORTH DISTRICT
U.S. ARMY CORPS OF ENGINEERS
FORT WORTH, TEXAS

Major Conclusions and Findings. At the request of the city of Dallas, the Fort Worth District undertook a study of the feasibility of substituting a greenbelt corridor between Ray Roberts Dam and Lewisville Lake for new recreation facilities development at Lewisville Lake. The cities of Dallas and Denton are contractually obligated to cost share in new recreation development and in relocation of existing facilities that will be necessitated by a pool raise at Lewisville Lake, a feature of the Ray Roberts Lake project. A greenbelt corridor concept had originally been proposed as a recreation alternative to traditional facilities development in the Supplemental Information Report (1974) on the Ray Roberts Lake project. No recreation development plan for new facilities at Lewisville Lake has been approved to date. Coordination was maintained with the local sponsors, The Texas Parks and Wildlife Department, the US Fish and Wildlife Service, landowners and the general public throughout the feasibility study of the greenbelt.

The proposed greenbelt corridor would encompass about 8 river miles between Ray Roberts Dam and flood pool lands at Lewisville Lake. Lands associated with the proposal would total about 1,600 acres (440 acres of which are currently in flowage easement) and would create a riparian corridor about 6 miles long and about a half mile wide. The corridor would require fee acquisition of about 660 acres and conservation easement acquisition on about 500 acres. An economic analysis indicates that the greenbelt would have a lower first cost ($3,036,500) than the recreation facilities development alone ($4,000,000) or than a combination of the two ($7,036,000). It would also have lower OM&R costs of $50,000 annually as compared to $245,000 annually for traditional lake facilities. The greenbelt would have a higher benefit-to-cost ratio of 5.35 compared to 3.33 for new Lewisville Lake facilities and 4.01 for the combination plan. Environmentally, the greenbelt would preserve habitat and esthetic values on the 1,600 acres. Although there is some cropland, pasture, and post oak woods in the proposed area, the

majority is fairly mature bottomland woods of pecan, elm, hackberry, and oak species. Without implementation of the greenbelt it is likely that, through time, much of this area will be developed in second homes or retirement homes due to flood protection provided by Ray Roberts Dam. Benefits of public ownership and management of the greenbelt would differ from those provide by traditional facilities and would include canoeing, hiking, horseback riding, stream fishing, and nature study. Benefits would be accommodated by extended access and minimum facilities development. Recreation attractiveness of the greenbelt is enhanced by the releases from Ray Roberts Lake which will be excellent for canoeing, stream fishing, and other stream oriented recreation.

By letters dated June 27 and 28, 1983, respectively, the cities of Dallas and Denton formally expressed their desire to participate in the greenbelt corridor in lieu of new facilities development at Lewisville Lake. By letter dated June 29, 1983, the Texas Parks and Wildlife Department formally expressed a desire to share in the first cost (25%) of implementation of the greenbelt and to assume all operation and maintenance responsibilities as a State recreation area. The State's participation in the project would be contingent upon approval of the Texas Parks and Wildlife Commission but would involve up-front financing of a portion of the first cost. Because of economic and environmental feasibility and because of the strong local sponsorship, the Fort Worth District proposes initial development of the greenbelt corridor with a future development plan for recreation facilities at Lewisville Lake. This proposal will require the approval of higher Corps authority. The cities of Dallas and Denton will remain obligated to share in the costs of relocating existing recreation facilities that are affected by the pool raise at Lewisville Lake whether the greenbelt is approved or not.

Areas of Controversy. A public Notice was issued in July 1983, which presented results of the District's investigations of feasibility of the greenbelt and recommended that the greenbelt be developed in lieu of more traditional facilities at Lewisville Lake. Due to public concern, the comment period was extended beyond the initial 30-day period.

Statements received at a public meeting held in Aubrey, Texas, on September 26, 1983, like comments received on the public notice, were about equally divided between those opposed to and those in favor of the proposal. Opposition was expressed primarily by landowners in the corridor area, and support was expressed primarily by public agencies, governmental entities, and environmental groups. The Southwestern Division of the Corps expressed the opinion that substitution of the greenbelt for new facilities was not acceptable due to different type of recreation benefits provided. The Division office also questioned the Corps' discretionary authority to approve the recommendation but allowed the District to continue evaluations to resolve issues. On December 15, 1983, the Fort Worth District issued a public notice that the study of the greenbelt corridor proposal would continue. On April 3, 1983, a public workshop was held, again in Aubrey, Texas, to obtain the input of interested parties. Many landowners again expressed opposition to the greenbelt but stated milder objections to conservation easements or a smaller greenbelt. The issue of acquisition of private lands for public purpose remains controversial. Environmentalists, recreationists, and fish and wildlife agencies expressed overwhelming support for a full sized greenbelt corridor at the workshop, through mailings, media, and meetings and workshops on the other related topics. The issue of providing for an alternative type of recreation other than traditional lake type facilities remains controversial.

Unresolved Issues. The primary issue remaining to be resolved is that of the Chief of Engineer's discretionary authority to approve implementation of the proposed greenbelt corridor. If the greenbelt proposal is not approved by higher Corps authority, either Congressional authorization can be sought or the proposal can be dropped. In the event that the proposal is not approved and specific Congressional authorization is not sought, the cities of Dallas and Denton will remain obligated to cost share in new facilities development and operation and maintenance in Hickory Creek Park at Lewisville Lake.

Relationship to Environmental Requirements.

National Environmental Policy Act of 1969. This Environmental Impact Assessment fulfills the requirements of Section 102 of PL 91-190 and documents criteria upon which a final decision will be based. It also provides for full disclosure of the decision process, public comment and input, and environmental effects of the proposal. It has been determined that, because beneficial and adverse impacts are minor in nature and tend to be offsetting, no formal Environmental Impact Statement will be prepared.

Fish and Wildlife Coordination Act of 1959. Project impacts on fish and wildlife resources, as well as impacts of the "no action" condition and other alternatives have been coordinated with the US Fish and Wildlife Service. Coordination will continue throughout the master planning effort.

Preservation of Historical and Archeological Data (PL 93-291), Historic Preservation Act of 1966 (PL 89-655), and Executive Order 11593. These laws and order have been met to the extent practicable for the present stage of planning. As the proposed plan is developed, it will be coordinated with District archeologists who will in turn coordinate with the Texas Historical Commission and State Historic Preservation Officer. Appropriate survey and testing will be concluded prior to approval of detailed plans.

Section 7, Endangered Species Act of 1973 (PL 93-205). The proposed plan is in full compliance with this Act. There are no known threatened or endangered species in the study area, and the proposal will have net beneficial environmental impacts. For this reason, formal consultation was not initiated.

Section 404 of the Clean Water Act of 1977 (PL 95-217). None of the facilities in the proposed greenbelt, with the possible exception of canoe/jon boat launching areas, would be regulated under Section 404. In general, boat ramps are permitted by regional general permit and would not be subject to additional requirements under Section 404.

Executive Orders 11988 and 11990, Flood Plain Management and Protection of Wetlands. The proposed greenbelt corridor would be within the spirit and intent of these orders.

Coastal Zone Management Act of 1972 (PL 92-583) and Wild and Scenic River Act (PL 90-542). These laws are not applicable to the proposed action.

Federal Water Project Recreation Act (PL 89-72). This law requires that any new parks or facilities developments at Federal projects have local cost sharing sponsors. Dallas and Denton are contractually obligated to share in recreation development at Lewisville Lake and to operate and maintain that development, but they have expressed their support for the greenbelt as the selected plan of development. Additionally, the Texas Parks and Wildlife Department desires to co-sponsor the greenbelt and assume all operation and maintenance. These proposed arrangements are in full compliance with the spirit and intent of this law.

ENVIRONMENTAL IMPACT ASSESSMENT

GREENBELT CORRIDOR BETWEEN RAY ROBERTS
DAM AND LEWISVILLE LAKE

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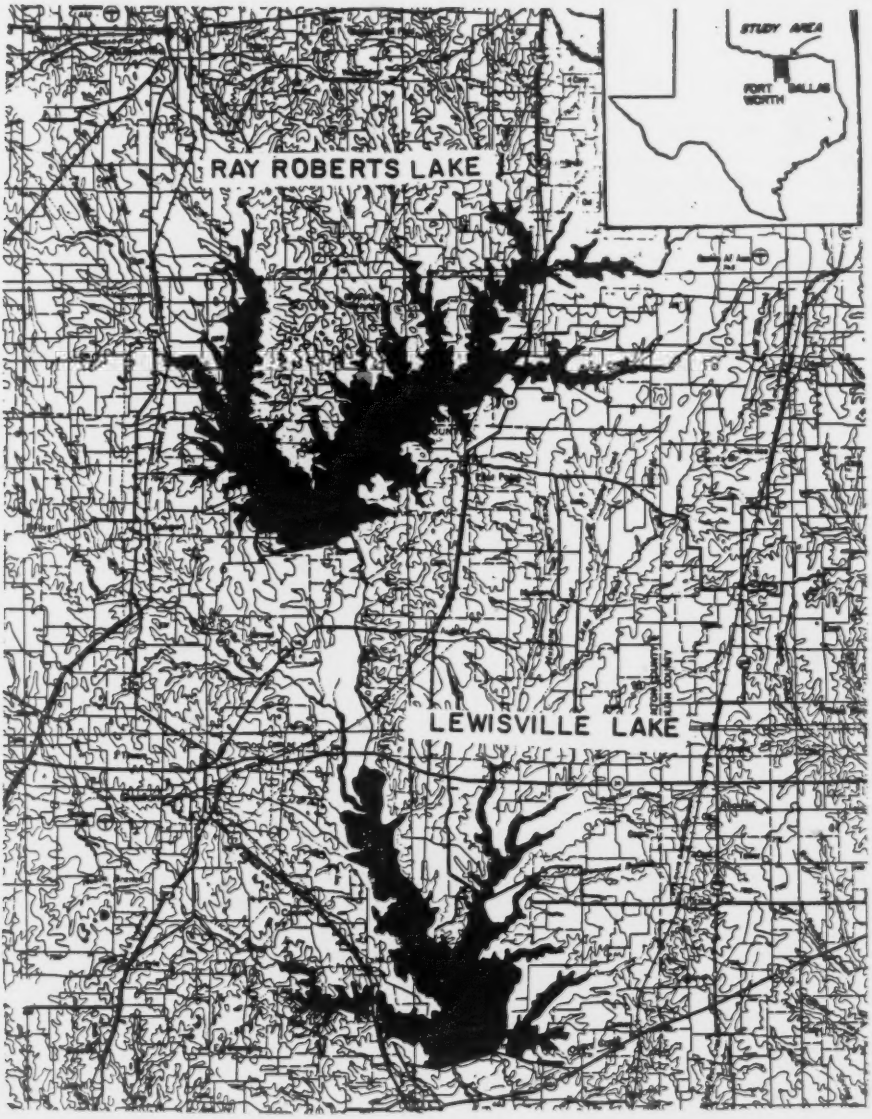
Study Authority. Section 301 of the Rivers and Harbors Act approved 27 October 1965 (Public Law 89-298) contains authority for construction of water resource development features of the Trinity River project substantially in accordance with House Document 276, 89th Congress, 1st Session. Aubrey (Ray Roberts) Reservoir, a feature of the Trinity River project, is authorized for the purposes of water supply, recreation, and fish and wildlife. Within Volume V of House Document 276, which contains the appendix for Recreation and Fish and Wildlife, are descriptions of recreation resource developments associated with both Aubrey (Ray Roberts) and Garza-Little Elm (Lewisville Lake). House Document 276 provides for a raise of the conservation pool of Lewisville Lake and for acquisition and/or easement conversion of up to 2,900 acres for public use at Lewisville Lake in association with the Ray Roberts project. House Document 276 also authorizes relocation of facilities affected by the pool raise and development of new facilities at Lewisville Lake. Land acquisition and construction activities associated with the project (see attached location map) are based on the approved General Design Memorandum with Supplemental Information, approved Real Estate Memorandum, and approved water supply contracts. Real estate acquisition began in September 1980, and construction was initiated in September 1981. Design Memorandum No. 8, the Ray Roberts Lake Master Plan. was approved in September 1983.

A Final Environmental Impact Statement (EIS) addressing the project as described in the 1973 General Design Memorandum (GDM) was filed with the President's Council on Environmental Quality on March 4, 1974. The final EIS addressed the impacts of raising the Lewisville Lake conservation pool elevation from 515 feet msl to 522 feet msl. It also addressed the impacts of that authorized pool raise on existing recreation facilities at Lewisville Lake and stated that acquisition of an additional 42 acres would be required for new facilities and to relocate existing recreation facilities to be inundated along the periphery


RAY ROBERTS LAKE
LEWISVILLE LAKE
STUDY AREA
FORT WORTH
DALLAS

of the lake. The 42 acres described in the GDM were located in seven small areas and that plan of recreation development was not approved by the reviewing Corps Officer. Rationale for non-approval was that recreation needs should be addressed in an appropriate master plan document. Although this plan was not approved, it is provided for in the recreation contracts with Dallas and Denton. On 15 September 1975, a final supplemental EIS for Ray Roberts Lake addressing project changes contained in a supplemental information report to the GDM was filed with the Council on Environmental Quality. That supplemental EIS addressed the pool raise at Ray Roberts Lake from elevation 627 feet msl to 632.5 feet msl and like the final EIS did not address an approved plan of recreation development for Lewisville Lake. To date, therefore, there is no approved plan for recreation development at Lewisville Lake. This Environmental Assessment addresses alternative plans for Lewisville and the recommended plan will be submitted for approval in an update of the Master Plan for Lewisville Lake.

By letter dated January 28, 1983, the city of Dallas formally requested that the Corps of Engineers investigate the stretch of land between Ray Roberts and Lewisville Lakes for its potential as a park. Specifically, the city of Dallas requested that the Corps investigate feasibility of substituting a greenbelt park for the recreational development at Lewisville Lake for which the cities of Dallas and Denton are contractually obligated. As a result of that request, and because of the provisions of House Document 276, the Corps undertook this study of the feasibility, economic costs and benefits, and social and environmental effects of the proposed greenbelt park.

Public Concerns. In any civil works project the acquisition of private lands for public purposes is considered to be a major area of public concern. Implementation of the greenbelt corridor at Lewisville Lake would defer any new facilities development around the lake until new cost sharing partners are identified or possible through the life of the project. This is considered a significant concern in light of projected increases in demand due to the growing population of the metroplex.

The needs for highly esthetic public open space, access to flowing streams, and preservation of riparian and stream ecosystems are also considered to be areas of significant public concern.

The 1983 public involvement program associated with realignment of existing park areas to accommodate updated management philosophies identified boating access to public waters as an area of public concern. The Boating Trades Association of Texas exhibited strong support for maintenance of existing boat launching facilities and continued development of new facilities when and where possible. The Texas Outdoor Recreation Plan (TORP) verifies this need. Additionally, the TORP, the Natural Areas of Texas, and public surveys all indicate high priority needs for large regional parks, public open space, and natural areas in proximity to the metroplex. Further, Texas Trailways and Natural Areas of Texas specifically identify the flood plain of Elm Fork between the two lakes as a significant regional resource suitable for development of a quality recreational trail system.

Planning Objectives. Study of the feasibility of the greenbelt corridor between Ray Roberts and Lewisville Lakes was initiated as an alternative to traditional recreation facilities at Lewisville Lakes for which the cities of Dallas and Denton are contractually obligated. In view of known public concerns, the following planning objectives were formulated:

- Preserve the natural resource base of the Elm Fork Between Ray Roberts and Lewisville Lakes while minimizing acquisition of private lands.
- Maintain a high level of net recreation benefits.
- Insure adequate boat access to public water bodies.
- Contribute to a quality recreation experience on public resources over the long term.
- Reduce first costs and annual charges to Federal Government and local sponsors.

Plans Eliminated From Further Study. The plan for recreation development at Lewisville Lake contained in the 1975 GDM provided for acquisition of 42 acres of specific recreation land scattered among seven small areas. It also provided for new development of 133 campsites, 74 picnic units, and 9 boat launching ramps. That plan was eliminated from further consideration for two reasons. First, the concept of scattered small park areas is no longer consistant with Corps operation and maintenance philosophy of fewer but larger more manageable park areas. Secondly, acquisition of those 42 acres has previously been recommended but not approved in three separate reports; the 1973 GDM, the 1974 Supplemental Information Report; and a 1974 Real Estate Design Memorandum. The dollar amount for the full 2,900 acres identified in HD 276, however, was approved in all of those reports pending approval of specifically defined recreation plan for Lewisville Lake in an appropriate report. The facilities numbers identified in those reports were approved and the dollar amount for those facilities (and also the 2,900 acres) were incorporated into the 1980 recreation contracts with the cities of Dallas and Denton. By letter dated January 28, 1983, the city of Dallas requested that the Corps investigate the potential of the greenbelt to satisfy the sponsors contractual obligations for recreation development at Lewisville Lake. Comments receive during the public involvement and planning process led to formulation and rejection of several additional alternaitves.

Various alternative park areas were considered for facilities development as were various greenbelt sizes and configurations. Several alternatives were formulated which would provide both a greenbelt and additional traditional facilities. Among these were development of Fish Trap Park at the downstream end of the corridor with operation and maintenance by the TPWD. Also considered was an increase in the number of facilities (several development levels) to be constructed in Lewisville State Park with the development cost to be paid by Dallas and Denton and

O&M by the TPWD. These alternatives were dropped from further consideration due to unsatisfactory terrain, concerns for periodic inundation, and lack of support by TPWD.

Without Conditions (No Action). Currently there are identified needs for traditional recreation facilities at Lewisville Lake. The Ray Roberts Lake authorization includes a conservation pool raise at Lewisville Lake from the 515 feet msl elevation to the 522 feet msl elevation and acquisition or easement conversion on lands to the 529 feet msl elevation for project purposes. This pool raise was addressed in the final EIS (1974) for Ray Roberts Lake. The pool raise will increase the lake's surface area by about 6,500 acres from 22,480 to 28,980 acres which, in turn, will increase the carrying capacity of the resource. Because of projected water supply withdrawals, the conservation pool of Lewisville Lake is expected to be no more stable than it has historically been; therefore, any increase in recreation use will come as a result of the increase in surface area. Recognizing this, House Document 276 provided authority for new recreation land and facilities at Lewisville Lake under the Ray Roberts Lake authorization.

The cities of Dallas and Denton are obligated to the development of new recreation facilities to accommodate the increased use, as well as to the relocation of facilities that will be affected by the pool raise. Regardless of what plan is ultimately approved for new facilities at Lewisville Lake, the cities of Dallas and Denton will participate in the relocation of facilities affected by the pool raise. Costs of relocation of affected facilities will be shared as a project cost proportionate to the sponsors costs for all project purposes. Regional demands for traditional lake recreation facilities at Lewisville Lake, assuming Ray Roberts Lake and Joe Pool Lake to be already in place, are identified as follows:

PROJECTED LAKE RECREATION DEMANDS
AND LEWISVILLE LAKE FACILITIES NEEDS

	1990		
	Demands (visitor days)	Total Facilities Needs	Net Facilities Needs 1/
Boating	1,165,307	75 lanes	34 lanes
Fishing	3,014,260	14 lanes	6 lanes
Picnicking	1,452,749	1,530 units	676 units
Sightseeing	1,025,470	-	-
Skiing	590,422	40 lanes	17 lanes
Swimming	792,409	27.5 acres	15.5 acres
Camping	574,885	1,466 units	998 units
"Other"	334,055	-	-

1/ Assumes Texas Parks and Wildlife Department development at the Lewisville State Park site and relocation of affected Lewisville Lake facilities.

Since the recreation facilities identified in HD 276 would only partially satisfy identified recreation needs, it is obvious that all authorized facilities approved in the 1974 GDM are needed. The TORP, in addition to projecting needs for traditional lake recreation facilities, projects a significant demand for stream-oriented recreational activities. Project demands and also the projected deficit of stream-oriented facilities caused by that demand for the years 1985 and 1995, as identified by the TORP, are displayed below.

PROJECTED STREAM-ORIENTED RECREATIION DEMANDS
AND REGIONAL FACILITIES NEEDS

	1985		1995	
	Demands (Vistor Days)	Needs (Stream/Trail Miles)	Demands (Visitor Days)	Needs (Stream/Trail Miles)
Canoeing, Kayaking, Rafting 1/	273,000	473	500,000	867
Stream Fishing	1,245,000	10.1	1,738,000	12.7
Horseback riding	1,769,000	33	3,632,000	42
Walking, Hiking, Nature Study	1,044,000	126	1,844,000	161

1/ Not shown in draft 1985 TORP, values are retained from 1980 TORP.

As can be seen from the above tables, significant needs exist in the study area for both traditional lake-type facilities and stream oriented recreation. It should be noted that demands shown for traditional facilities were calculated assuming Ray Roberts Lake, Joe Pool Lake, and Lewisville State Park recreation facilities to be in-place. Similiar needs also exist for all other lakes in the Metroplex region. Demands and needs shown for stream-oriented recreation are regional in scope and cannot reasonably be narrowed down to the Lewisville Lake site because of the relative scarcity of stream-oriented recreation opportunities. For example, a recreationist living in Garland, Texas, might travel to Lake Lavon for lake-type recreation but would travel farther to a greenbelt between Ray Roberts and Lewisville Lake since no closer opportunities exist. Because of the needs identified above and because of contractual agreements with Dallas and Denton, "No Action" is not considered a viable alternative.

Plans Considered in Detail. Because of the nature of the request of the city of Dallas (". . . can the greenbelt park be substituted for the recreational development Dallas is committed to at Lewisville Lake?), only three plans have been considered in detail. The "Without Project" or "No Action" condition described above is evaluated in this assessment relative to "Facilities Only" (consistent with current O&M philosophy), a "Combination Plan" which includes the greenbelt and new facilities (plate 1), and the "Greenbelt Only" (plate 2).

Facilities Only. As a result of recently evolved recreation management philosophy the facilities development plan described in the 1974 GDM is no longer considered to be a viable recreation design. That plan called for a scattering of new recreation facilities throughout seven small park areas. It has been demonstrated through experience that a higher quality recreation experience can be more economically and effeciently achieved within fewer but larger park areas. This philosophy led to formulation of a "Facilities Only" plan to meet the project sponsors contractual recreation obligations. Hickory Creek Park, on the west side of Lewisville Lake (see plate 1) was identified as the most appropriate area, in terms of acreage, topography, and vegetation, to accommodate new facilities to be developed and managed by Dallas and Denton.

Within Hickory Creek Park, the "Facilities Only" developed would consist of 120 campsites, 35 picnic sites, 4 group pavilions, and one boat ramp with four boat launching ramps. Numbers of facilities and park design for the "Facilities Only" plan are based on site topography and the carrying capacity of the resource base for water-oriented recreation. Hickory Creek Park consists of about 400 acres of moderately rolling post oak woods and semi-wooded lands. This park has previously been managed by the city of Denton but due to visitation and management problems, Denton returned management responsibility to the Corps. There are currently 12 picnic facilities and one boat ramp in the park but, as apart of the Fort Worth District's "park closure" program, those facilities are being relocated to Pilot Knoll Park for

effeciency of Corps management. Hickory Creek Park is currently closed to vehicular access and development as the "Facilities Only" plan, therefore, would essentially create a "new" park at Lewisville Lake. No additional lands would be specifically required for public use and access with this plan.

Development of Hickory Creek Park in the manner described above would fulfill the contractural obligations of the cities of Dallas and Denton for recreation development at Lewisville Lake. First costs of $4,034,000 would be shared at 50 percent Corps and 50 percent Dallas and Denton. Operation, maintenance, and replacement (OM&R) costs of $245,000 annually would be the responsibility of the cities. This plan would have annual benefits of $1,807,100 and a benefit-to-cost ratio of 3.33 to 1.0.

Greenbelt Only. As illustrated by plate 2 attached to this EIA, the total greenbelt corridor would include about 14 river miles long and would average about 1/2 mile in width. It encompasses about 8 river miles and 6 land miles from Ray Roberts Dam to the project lands for Lewisville Lake. Lands associated with the corridor consist of riparian bottom lands, uplands, post-oak woodlands, and forested flood plain bottoms converted from Lewisville Lake flowage easement to fee title. Although some of the total corridor is in pasture or cropland, the fee simple area is an almost continous corridor of riparian woods. The plan would require fee acquisition of about 660 acres, acquisition of conservation easement on about 500 acres, and conversion from existing flowage easement to fee of about 440 acres.

With the greenbelt plan, canoe launching and take-out points would be provided just below the Ray Roberts Dam and at the two major highway crossings upstream of Lewisville Lake. Additionally, 10 primitive camping sites would be interspersed along the stream course. An equestrian and hiking trail is designed to take advantage of the diverse stream-oriented terrestrial resources of the greenbelt corridor. The tail system would consist of a total of about 12 miles of separate

hiking paths and equestrian trails. Horseback trails would be in the form of large designated areas rather than specifically developed and designated trails. There would also be several bridges in association with the trail system so that the trails would meander estheticaly through the entire corridor. All facilities development would be confined to the portion of the greenbelt that would be acquired in fee.

The lands to be acquired in fee would be the minimum that TPWD considers to be viable for stream-oriented recreation pursuits between the lakes. Acquisition of conservation easements adjacent to the corridor would assure that the rural character of the river corridor remains intact and would provide a visual buffer between the river and future development. Easement provisions would allow landowners to retain title to their lands and would allow for continuance of existing agricultural pursuits such as pasture and row crops. Restrictions on more intensive agricultural use and on structures such as residences, barns, or outbuildings would be conditions of the conservation easements so that the area's rural character would not be lost. The corridor would be delineated along the fee acquisition line, and all recreation trails, primitive campsites, access points, and boat launching facilities would be located on fee lands.

The "Greenbelt Only" plan has a total First Cost of $3,036,000. It would have one more local sponsor than the "Facilities Only" with participation of the TPWD in its initial development. As formulated, first costs would be shared at 37.5 percent Corps, 25 percent TPWD, and 37.5 percent split between Dallas and Denton. OM&R responsibility and costs, estimated at $50,000 annually, would be by TPWD. In addition to the greenbelt, the TPWD would assume management responsibility for about 2,400 acres of existing project lands at Lewisville Lake (upstream of Hwy 380) for public use purposes. The greenbelt plan would have annual benefits of $1,476,000 and a benefit-to-cost ratio of 5.35 to 1.0. This is the Recommended Plan.

Combination Plan. Due to the significant regional needs identified for both lake and stream-oriented recreation, a plan was formulated which would address both types of needs and still remain within, or close to, the cities contractural obligations. The combination plan in the final array consists of both the greenbelt and the facilities development described above. This plan would have to the greatest excess benefits over costs and would provide for a greater diversity of recreational benefits that either the "Facilities Only" or the "Greenbelt Only".

The combination plan would have a first cost of $7,060,000. It would have annual benefits of $4,283,00 and a benefit-to-cost ratio of 4.01 to 1.0. When formulated, the TPWD had expressed an interest in sharing in the initial costs of the greenbelt portion and in assuming all OM&R of both the greenbelt and the new facilities at Hickory Creek Park; provided the cites would assume some of the OM&R costs of the new facilities. Dallas and Denton were of the opinion that such an arrangement would be beyond the scope of their contractual committment. As a result, the TPWD stated that due to recent expansions of their parks program, they could not assume the total annual OM&R costs ($295,000).

Comparative Impacts of A ternatives. Table EIA-1 displays the relative impacts of the three alternative of the final array on the major Federal planning accounts. With recommendation of the "Greenbelt Only", the "Facilities Only" plan will become a future recreation development plan for Lewisville Lake, pending identification of sponsors to share in first costs and all OM&R. In the event that the recommended plan is not approved by higher Corps authorities, the "Facilities Only" plan will, under contractual arrangement with Dallas and Denton, become the plan for recreation development at Lewisville Lake.

TABLE XIA-1

COMPARATIVE IMPACTS OF ALTERNATIVES

[illegible]	FACILITIES ONLY	[illegible] ONLY	COMBINATION PLAN 1/
NATIONAL ECONOMIC DEVELOPMENT			
FIRST COST			
Corps	$2,000,000	$1,130,700	$3,510,200
Dallas	1,680,000	842,800	2,041,900
Denton	520,000	296,100	717,300
TPWD	-	714,100	730,100
Total	$4,080,000	$2,983,700	$7,040,500
SOLD	$ 283,000	$ 30,000	$ 295,000
ANNUAL CHARGES	$ 542,600	$ 275,900	$ 818,500
BENEFITS			
Canoeing/Rafting	$ -	$ 120,000	$ 120,000
Stream Fishing	-	996,000	996,000
Horseback Riding	-	79,500	79,500
Biking/Walking	-	80,600	80,600
Boating	169,400	-	169,400
Lake Fishing	177,000	-	177,000
Picnicking	626,000	-	626,000
Sight Seeing	121,900	-	129,900
Swimming	250,600	-	250,600
Camping	435,700	-	435,700
Other	23,700	-	23,700
Total	$1,803,100	$1,476,100	$3,283,700
EXCESS BENEFITS	$1,260,500	$1,200,200	$2,464,700
B/C Ratio	3.33	5.35	4.01
Environmental Quality	Provides for 4 percent of the projected overall demand for traditional lake recreation facilities at Lewisville Lake for the year 1990. Would certainly a much lesser percentage of regional needs for lake-type facilities. Does nothing to satisfy more unique stream-oriented recreation demands. Induced economic pressures will continue to degrade riparian habitat values through time in the area between the lakes. New facilities development would be compatible with relocation of facilities encountered by Lewisville Lake pool raise.	Provides for 10 percent and 5 percent of the projected regional stream-oriented recreation needs for the years 1985 and 1995. May slightly reduce the demand for more traditional lake recreation facilities. Would preserve habitat and aesthetic values on 1,500 acres of riparian bottomlands and 140 acres of upland habitat. Efficient relocation of facilities affected by Lewisville Lake pool raise could somewhat ease projected lake facility deficits.	Satisfies 4 percent of facilities needs specific to Lewisville Lake and 5 percent of regional needs for stream-oriented recreation. Would preserve habitat values on 1,600 acres of riparian (and upland) habitats.
Regional Economic Development	Local economies would be stimulated by expenditures of an additional 183,110 visitor-days/year. No loss of acreage from local tax base. Fifty percent of first cost and all OM&R borne by Dallas and Denton, with subsequent influence on water rates.	Local economies would be stimulated by expenditures of an additional 437,102 visitor-days/year. 1,600 acres would be removed from local tax rolls. Seventy-five percent of first cost to be shared between Dallas, Denton, and the State of Texas. Annual OM&R costs of $50,000 would be borne by the State. State expenditures may be recouped through user charges rather than property taxes or water rates. Affluence increases could offset losses to local tax base.	Local economies would be stimulated by expenditures of an additional 620,200 visitor-days/year. Loss of 1,600 acres from local tax rolls offset somewhat by affluence increases. Water rate increases required to offset cities share of increased first costs.
Other Social Effects	Some slight easing of overcrowded recreation facilities at Lewisville Lake with new facilities. No action on the greenbelt corridor would almost certainly preclude implementation of this stream-oriented open space concept in the future. This would not preclude use of the streams by boat but would limit benefits to a much narrower segment of the public. Continued private ownership would allow continued or more intensive uses of the riparian lands at the owners discretion. Dallas and Denton do not desire to be recreation managers at Lewisville possibly creating OM&R problems (under PL 89-72, Corps cannot enforce OM&R unless sponsors default)	Preservation of 1,600 acres of mostly riparian habitat would be insured for the enjoyment of future generations. Would protect against catastrophic flooding of induced flood plain developments to the extent that design discharges are surveyed. Total acreage removed from private sector would not exceed the 3% 27% authorization (2,960 acres). OM&R would be by willing and most appropriate sponsor (TPWD) as would management of 1,600 acres of existing project lands at Lewisville Lake.	Would provide most diverse recreation opportunities. Would preserve 1,600 acres in public open space for future generations. Would protect against potential induced future flood damages in the flood plain between the lakes. When originally formulated, TPWD would manage greenbelt and new facilities. Dallas and Denton do not support due to increased first costs. TPWD cannot pay all OM&R costs. This plan is therefore institutionally infeasible.

The Combination Plan was initially selected as the plan for recommendation due to net economic benefits (NED Plan). Lack of support (and commensurable by Dallas, Denton, and the TPWD placed restrictions upon this plan which prohibits its recommendation.

AFFECTED ENVIRONMENT

Environmental Setting. Ray Roberts Lake is currently under construction. When completed, project lands will cover 43,600 acres, including 29,350 acres in the conservation pool at elevation 632.51 feet msl. The damsite is located 30 miles upstream from the Lewisville Lake Dam. Authorization for the Ray Roberts Lake project includes a reallocation of flood storage at Lewisville Lake to Ray Roberts and subsequent raising of the water supply pool at Lewisville by 7 feet to elevation 522 feet msl. Associated with the Lewisville Lake pool raise is authorization of necessary project lands, new recreation lands and facilities, and relocation of existing recreation facilities affected by the pool raise.

The Ray Roberts/Lewisville Lake system controls runoff from the Elm Fork of the Trinity watershed which forms a rectangle approximately 60 miles wide by 50 miles long, covering 1,660 square miles of drainage. This watershed falls to the southeast with elevations of 1,210 feet msl in the upper reaches to 387 feet msl at the confluence with the West Fork of the Trinity River. The main divide of the watershed is 200 to 400 feet higher than the banks of the river. The Elm Fork follows a meandering course through its valley which is 119 miles long. It has an average fall of 6.92 feet per mile, with a total fall of 823 feet. Both lakes are confined within the valleys of the Elm Fork and its tributary streams. The watershed lies in a mild, moderately humid climatic zone. Average annual precipitation is about 31.6 inches in the watershed near Ray Roberts Dam. The mean annual temperature is about 65.5° Fahrenheit with record highs and lows of 113° and minus 3°, respectively, as recorded at Denton, 15 miles west of the Elm Fork. Growing seasons extend from mid-March to late November. Summers are hot and winters mild with occasional cold periods of short duration.

The topography is generally flat to rolling hills; however, there are some steep slopes and cliffs in the upper reaches of Lewisville Lake. The primary geologic formations in the area are the Eagle Ford and the Woodbine Groups characterized by shale (both hard and soft) with interludes of sand and sandstone in the Woodbine. Residual overburden, flood plain alluvium, and terrace deposits cover a variety of rock types and textures. Residual soils on the western half are somewhat sandy, while the soils to the east are generally clayey. There are many different soils in the study area comprised of more than 15 major series. These series are part of the Cross Timbers and Prairies and the Blackland Prairie Land Resources Areas and include the Ferris-Heiden clay, Heiden clay, Banti X-Ray complex, Houston black clay, Banti fine-sandy loan, and the Bastrop fine-sandy loan. The sandy loams are, in general, fairly shallow (to 16 inches) on a clay based subsoil with a deep profile to bedrock. The clay soils have a moderate to deep profile with a deep topsoil. The use limiting factors to consider are (1) moderate to slow permeability, (2) limited available water holding capacity, (3) high to very high shrink-swell potential (except the sandy soils), (4) high erodibility when ground cover is gone. The soils are generally fertile with high vegetation growth potential if not compacted. Slope is generally less than 8 percent, with some slopes of 100 percent (45 degrees) or greater. Existing erosion conditions vary from exposed bedrock to some minor sheet erosion. Leakage from the lake is apparently confined to bank storage within flood plain deposits. The Woodbine is an important aquifer in the region; some local recharge to this formation may be received from Lewisville Lake through an eroded shale cap.

Based upon the accepted parameters for drinking water, the lake waters at Lewisville Lake can be considered very good. The average turbidity is low as are the dissolved minerals. The pH (average 7.9) is well inside the limits for drinking waters, or for swimming beaches. No water quality parameter measured could be considered detrimental to aquatic life in the lake. There is a possibility that low levels of nitrates and sulfates may limit algae and plankton growth. The upper 25

feet of the lake's profile is generally well oxygenated and should not cause any oxygen stress. As with all large impoundments, there are areas that have poor quality due to turbidity, mineral content, organic matter, or lack of circulation. Quality of Ray Roberts Lake waters will likely be much the same.

The bottomlands of the study area are covered with a hardwood forest of pecan, American elm, willow, cottonwood, walnut, box elder, sycamore, bur oak, hackberry, green ash, and other species. Slopes and uplands support numerous blackjack, post, and live oaks, hackberry, honey locust, and persimmon. Ground cover consist of such native grasses as buffalograss, bluestem, and grama combined with various forbs and vines. Much of the area has been cleared for agriculture or grazing. Overgrazing and burning prior to project construction reduced pasture vegetation on slopes and uplands to fair condition. Bloodweed, broomweed, cocklebur, and Johnson grass are now common invaders in the area. Aquatic vegetation and algae are not widespread in Lewisville Lake or in the Elm Fork.

Principal game fishes of Lewisville Lake and the Elm Fork are largemouth bass, white bass, white crappie, channel catfish, and flathead catfish. Roughfish include various species of gar, carp, buffalo, and river carpsuckers. Also present are several species of shad, minnows, bullheads, sunfish, and lower forms of aquatic life. Near Lewisville Lake, the proportion of game fishes is decreasing and that of rough fishes is increasing as is usual in the aging process of most large impoundments.

Wildlife game species of the study area include white-tailed deer, mourning doves, bobwhite quail, fox squirrels, cottontail rabbits, and various species of ducks and geese. Small mammals represented are mink, raccoons, skunks, opposums, gray foxes, coyotes, bobcats, armadillos, jackrabbits, nutria, and various rodents. A refuge area has been designated for a remnant population of beaver found below the Lewisville Dam. Numerous species of song birds, wading and shore birds, and other

bird groups are resident or migrate through the area. Also present are many species of reptiles and amphibians.

Any acreage acquired in fee for recreation facilities at Lewisville Lake or for the greenbelt corridor will require a cultural resources survey. This section of the Elm Fork has never been adequately surveyed in terms of cultural resources. The required survey will be incorporated into the survey effort which must be carried out on the project lands to be acquired or to be inundated by the Lewisville Lake pool raise. Probability of discovering archeological sites in the riparian bottomlands is not extremely high since the scouring of the river channel and its alluvial deposits, along with the thick vegetation, will obscure sites, and sites in the bottom tend to be smaller and more ephemeral. There are four known sites located in the Elm Fork bottoms within 1 mile of the Ray Roberts damsite. Uplands of the study area, either adjacent to the greenbelt or Lewisville Lake, have a much higher probability of site occurrence. Treatment of cultural resources located during the survey will be covered in the Cultural Resources Feature Design Memorandum for Ray Roberts Lake.

Areas within the zone of influence located north and east of the project are devoted primarily to livestock and framing. Metropolitan areas of Dallas, mid-cities region, and Fort Worth, located to the south and southeast, comprise a heavily populated residential, business, and industrial complex. Principal population centers within a seven county area around Lewisville Lake include Dallas, Fort Worth, Lewisville, McKinney, Denton, Plano, Arlington, Garland, and Mesquite. Much of the seven county area is rural, but rapidly increasing in population, with many small farms and ranches. Population in this are increased 18.9 percent between 1970 (2.293 million) and 1980 (2,828 million). A relatively large percentage of that growth occurred in the less urbanized counties. Land use in the seven county area has been continuously changing from crops to urban development and to pasture and rangeland. This trend is expected to continue, along with subsequent increases in land values.

Lewisville Lake has affected the economy of the surrounding area in numerous ways, while other nearby recreational areas at Lavon, Grapevine, and Ray Hubbard Lakes have complemented this project's effect on the area. Ray Roberts Lake will have similar effects. Direct effects of Lewisville Lake include the following.

The Corps of Engineers employs 14 to 18 people for operation and maintenance work at the lake. Most of these employees live in the immediate area and contribute to the economy. The annual expenditures amount to more than $638,000, including contracted work such as mowing and cleaning. Operation of the Lewisville Lake project created an opportunity for numerous small businesses near the lake which provide food, service items, fuel, bait, and tackle. Seven concessionairees on the lake and their employees derive their income from the lake associated activities and contribute to the local economy. Many boat dealers and marine equipment suppliers are located near the lake. Several local contractors derive part or all of their income from work on project lands.

In 1982, over 6.8 million people visited Lewisville Lake. Their expenditures for food, lodging, gas, oil, other transportation, and miscellaneous items amounted to an estimated $15.74 million. There are approximately 50 subdivisions surrounding the Lewisville Lake area. Property in the vicinity of the lake has increased several hundred percent in value. Much of the development is attributable to the presence of the lake, and it is probable that Ray Roberts Lake will have very similar economic and land use intensification effects.

Significant Resources. During the study of recreation alternatives, two major resources were identified as being significant to the region. Identification of these resources as significant was primarily through reports and data of Federal, State, and local governmental entities and through input of local and regional conservation organizations. The actual resource base of the greenbelt area and the stream-oriented open space concept have been identified by the TORP, Texas Conservation Foundation, North Central Texas Council of Governments, US Fish and

Wildlife Service, the cities of Dallas and Denton, and "Natural Areas of Texas" as significant to the region. Lake recreation opportunities have been identified as significant to the region by the above groups and by the Boating Trades Association of Texas.

The proposed greenbelt corridor is located in an undeveloped area close to and readily accessible form a large metropolitan area. It would connect two large blocks of public land and provide public access to a significant portion of the Elm Fork of the Trinity River. The Elm Fork of the Trinity River is identified as a potential trail resource both in the TORP and in Texas Trailways, A Feasibility Report of a System of Trails in Texas. Texas Trailways states that, "the flood plain of the Elm Fork could provide sufficient resources for the development of a quality recreational trail." The TORP identifies stream corridors, in general, as a highest resource priority. The TORP states that "A Trinity River greenbelt would be one such regional recreation area which has the potential for meeting the needs for hike and bike trails, passive recreation, and other regional needs." The report "Natural Areas of Texas" identifies the flood plain of the Elm Fork between the two lakes as a significant regional resource.

Although some of the flood plain in this reach is pasture or cropland, there is an almost continuous corridor of riparian woods. These woodlands are mostly mature, but some areas are in various successional stages. Predominate overstory species include American and cedar, elm, hackberry, pecan, and Burr and Shumard oak. Throughout much of the stream reach, a dense canopy or partial canopy is formed over the stream.

The stream in this reach under existing conditions provides a quality fishery and during moderate flows is suitable for canoeing. Reservoir routings performed by the city of Dallas on its proposed water supply release plan indicates that for more than 90 percent of the the time releases from Ray Roberts Dam will be at least 130 cfs. In addition, in coordination with the US Fish and Wildlife Service, the cities

of Dallas and Denton have formally agreed, by Memorandum of Agreement, to maintain continuous minimum monthly discharges.

The guaranteed releases during the first half of the year will be adequate to marginal for canoeing but should provide more than sufficient survival habitat for maintenance of a quality stream fishery. This is especially true considering the diverse substrates and riffle and pool complexes through the stream reach. The proposed water supply/hydropower releases (130 cfs and greater) by Dallas and Denton, however, should provide an excellent stream fishery and canoeing experience. Lack of public access to the stream and particularly its adjacent riparian corridor severely limits the area's recreation potential at present and after construction of Ray Roberts Lake is complete.

Significant demand for such types of low density recreation as hiking, nature study, canoeing, horseback riding, and primitive camping exists throughout Texas in general and the Dallas/Fort Worth metroplex in particular. Interest in these types of activities is indicated by a number of sources. The TORP states that:

> "In the greater Dallas/Fort Worth metropolitan area, securing large tracts of land for present and future needs is a tremendous problem. The need for large regional parks, open space, and natural areas in, or close to, the metropolitan area is a high priority."

In a survey conducted by the Texas Parks and Wildlife Department during the public involvement process for the development of recreational facilities at Ray Roberts Lake, 74.2 percent of the respondents indicated that hiking trails are desirable. Additionally, 64.5 percent responded that primitive campsites are desirable, and 45.2 percent indicated that horseback riding trails are desirable.

A second survey, of more limited geographical scope, was conducted as part of a petition against development of a marina in Johnson Branch Park. There were 332 respondents in this survey, as opposed to 62 in the Texas Parks and Wildlife Department survey. When asked to list

their favorite leisure time activities, the responses were as follows: 66.6 percent indicated just getting away, 50.3 percent indicated horseback riding, 49.4 percent indicated hiking, 40.8 percent indicated fishing, 37.7 percent indicated primitive camping, 34.3 percent indicated backpacking, 30.7 percent indicated nature study, and 26.5 percent indicated canoeing.

In addition to these surveys, the TORP also projects a significant demand for these types of recreational activities. Projected participation and also the projected deficit in recreation facilities caused by the projected demand for the years 1985 and 2000, as identified by the TORP, are displayed in the alternatives section of this EIA.

Traditional lake recreation facilities are also significant in terms of regional activity. TORP Region 4, which includes the Dallas/Fort Worth metroplex and most of the Lewisville recreation market area, is ranked second among the 24 TORP regions in the number of acres of freshwater suitable for boating, fishing, or skiing. Alternatives available to residents of Lewisville Lake's seven county market area include Benbrook, Eagle Mountain, Lake Worth, Grapevine, Lavon, Joe Pool, Ray Roberts, Arlington, Mountain Creek, Ray Hubbard, Moss, Texoma, Kiowa, and Bonham, as well as numerous smaller impoundments. In spite of this, the region's projected per capita figure of .039 acres of freshwater availability in the year 1990 is significantly below the statewide per capita availability of .054 acres.

The total regional demand for recreation at Lewisville Lake, estimated using the same method as for the greenbelt alternatives, is projected to be 7,770,000 visits by the year 1990. Based on the activity distribution exhibited by Lewisville visitors over the period 1876-1982, the participation estimates displayed in the alternatives section were developed. The existing facilities at Lewisville Lake (including 281 camping units, 604 picnic units, 6 developed beaches, and 70 boat launching lanes) are insufficient to meet the projected 1990 needs. The State of Texas is currently developing the Hackberry State Park site and

plans to install approximately 125 multiple use sites and 3 boat lanes. Even with this development, a facilities deficit at Lewisville Lake will exist by 1990.

The Corps of Engineers is currently involved in a program of consolidating and relocating existing recreation facilities at Lewisville Lake in compliance with recent management directives. Tailoring this relocation program to meet changed recreation patterns which have evolved since the project was constructed is expected to increase the carrying capacity of project resources without significantly changing the number of facilities. Additional relocations resulting directly from the pool raise, which will occur whether or not the greenbelt plan is implemented, provides extended opportunities to maximize the efficiency of recreation facilities. These opportunities are currently being developed in the update of the Lewisville Lake master plan.

ENVIRONMENTAL EFFECTS

None of the recreation development alternatives for Lewisville Lake would have a significant effect on the natural or manmade environments of the study area. Neither the recommended plan nor its alternatives would significantly effect air quality, noise, water quality, endangered species, wetlands, cultural resources, or the socioeconomic climate of the study area. This is especially true when it is realized that some development of recreation at Lewisville Lake has been previously considered under the National Environmental Policy Act, (Ray Roberts Lake EIS, 4 March 1974), although specific land acquisition as currently recommended has not been addressed.

There would be effects, although insignificant nationally, upon the two resources of the study area identified as being significant to the region; these being the resource base of the greenbelt area and lake recreation in general. Implementation of the greenbelt corridor would require fee acquisition of about 1,100 acres and easement acquisition of about 500 acres from the private sector for public use purposes. Of that acreage, however, 440 acres already are under flowage easement for Lewisville Lake. House Document 276 allows for acquisition or easement conversion for public use purposes of up to 2,900 acres. None of the lands proposed for acquisition are developed for human habitation although some of the area is currently in cropland and pasture. With Ray Roberts Lake in place and without implementation of the greenbelt, it is probable that much of the present flood plain area (which will no longer be flood plain) will be developed for second homes or retirement homes. This area has been identified by numerous sources as an important resource to the region. Clearing of riparian forest lands for agriculture, waste disposal, residential and urban development, channelizations, and inundation through impoundments throughout the state compound the areas' importance as a remaining natural riparian system in proximity to an expanding urban population. Without the recommended plan, this resource would be lost or much altered, and the opportunity for its conservation would be forgone.

With implementation of the greenbelt corridor by Dallas, Denton, the Texas Parks and Wildlife Department, and the Corps of Engineers, preservation of this stretch of the Elm Fork flood plain would be insured. Through time, with public ownership, the present habitat and esthetic values of the riparian woodlands of pecan, elm, and oak would increase as cut-over areas mature and succession occurs on old fields. Minimum recreation facility development associated with the corridor will provide for a substantial portion of the study area's needs for open space, hiking and equestrian trails, primitive camping, nature study, canoeing, tubing, rafting, and stream fishing. These needs are projected to become even more acute in the future as the urban population of the metroplex continues to increase. Operation and maintenance of the greenbelt by the Texas Parks and Wildlife Department (contingent upon approval of the Texas Parks and Wildlife Commission) will place a slight financial burden upon the State of Texas but will insure management for best use for both recreation and natural resource values.

Development of the "Greenbelt Only" plan does not preclude development of new recreation facilities on Lewisville Lake. The recreation development plan for Hickory Creek Park will be included in the update of the Master Plan for Lewisville Lake as a future development plan. However, a new recreation sponsor would be required for cost sharing in any facilities before they would be constructed. As a result, the adverse impacts of the greenbelt include temporarily forgone benefits attributable to traditional lake recreation. In the event that the recommended greenbelt is not approved by reviewing Corps officials, Dallas and Denton would share in development of Hickory Creek Park and the greenbelt benefits would be forgone.

Based on the regional demand for lake recreation and population distribution relative to Lewisville Lake and alternative sites for lake recreation, a facilities deficit exists and is projected for the year 1990. Any alternative for new facilities at Lewisville is insufficient to compensate for this projected deficit. Therefore, the regional demand for recreatiion at the Lewisville project will be greater than

the supply of facilities whether or not "Facilities Only" or the greenbelt plan is implemented. In terms of degree, however, the deficit would be greater without the Hickory Creek Park facilities.

To some extent, implementation of the greenbelt can be expected to satisfy some of the regional demand of lake recreation, particularly in terms of shoreline fishing. In most other categories, however, the two resources are not substitutes for one another, as the type of recreation experience provided by each is quite different.

It is also expected that the recreation deficit for lake-type facilities developing the greenbelt and deferring Hickory Creek Park development can be at least partially offset by efficient facilities relocations necessitated by the pool raise and ongoing park realignment. In particular, an increase in parking provided during the redesign and rework of boat ramps is expected to create a large increase in their capacity over the existing situation.

Economically, the effects of initial development of the greenbelt corridor, as compared to the other alternatives, at Lewisville Lake would be beneficial from both the national and local perspective. The "Greenbelt Only" would have a lower first cost of $3,036,500, as compared to an estimated $4,000,000 for Hickory Creek Park and $7,000,000 for the combination plan. The greenbelt would involve a four-way partnership between the Corps, Dallas, Denton, and the Texas Parks and Wildlife Department so that first costs to each entity would be further reduced from costs of "Facilities Only" which would be shared only between the Corps and cities. Annual OM&R costs of the greenbelt are estimated at $50,000 and would be assumed by the Texas Parks and Wildlife Department, the most appropriate management entity. OM&R costs of Hickory Creek Park are estimated at $245,000 annually and would be shared between the cities of Dallas and Denton if the "Greenbelt Only" is not approved. In order to comply with the administration policies on cost-sharing and in order for the cities to fulfill their contractural committments (financially), first cost of the "Greenbelt Only" will be

shared at 25 percent TPWD, and 37.0 percent by the cities for total non-Federal participation of 62.5 percent. The portion shared by the state will be financed by the state.

Recreation benefits of each alternative when translated to projected dollar values, are roughly equivalent to benefits uses in cost allocations. In summary, the greenbelt would reduce first costs to the Federal Government and to the local sponsors, it would reduce annual OM&R charges, it would provide for up-front financing (25 percent by Texas Parks and Wildlife Department) of part of the first cost, and it would have a higher benefit-to-cost ratio than development of new recreation facilities at Lewisville Lake. With any alternative, there will still be a cost associated with relocation of existing recreation facilities associated with the Lewisville pool raise.

PUBLIC INVOLVEMENT

Public Involvement Program. Public involvement in the analysis of recreation development alternatives at Lewisville Lake has been extensive. Since the study was initiated at the request of the city of Dallas in January 1983, there have been numerous meetings with Federal and state government agencies, local governments, councils of government, and staff presentations to environmental organizations. One meeting was held in Aubrey, Texas, at the request of area landowners. A public meeting and a public workshop was held, again in Aubrey, to obtain public comments on the initial greenbelt proposal and to obtain input on alternatives, respectively. A total of seven public notices have been issued to a mailing list of over 300 individuals, organizations, and agencies.

Public notice of the Fort Worth District recommendation of the greenbelt corridor (1,860 acres in fee acquisition rather than the current 1,100 acres fee and 500 acres easement) was first issued on July 26, 1983. On August 18, 1983, Corps staff met with project area residents in Aubrey, Texas, to hear their views on the original proposal. Notice of a Public Meeting was issued on September 3, 1983, and that meeting was subsequently held on September 26, 1983. On December 15, 1983, a public notice was issued which announced that study of the proposal would be continued. An announcement of a Public Workshop to discuss alternatives was made on March 15, 1984, with the workshop held on April 3, 1984. On April 13, 1984 an information paper was released which provided the results of the workshop to all interested parties. During the time between that information paper and the Public Notice contained in Attachment I, many telephone and written comments were received (and considered) from landowners, environmental groups and individuals, and other interested parties.

Required Coordination. The greenbelt corridor between Ray Roberts and Lewisville Lakes was conceptually proposed as a recreation alternative in the September 1974, Supplemental Information Report (which addressed the Ray Roberts pool raise to elevation 632.5 feet msl). The concept was endorsed by the US Fish and Wildlife Service, in 1975, in commenting on the Supplemental Information Report and Supplemental EIS. At that time, the Texas Parks and Wildlife Department stated strong support for the proposal. In 1976, the State agency, in addition to expressing an interest in the possibility of cost sharing, requested that benefits, including hiking, bicycling, canoeing, camping, picnicing, nature study, and stream fishing be investigated. Because of that request and the January 1983, request of the city of Dallas, the Corps undertook a study of the feasibility, economic costs and benefits, and social and environmental effects of the proposed greenbelt. Close coordination with the Texas Parks and Wildlife Department led to delineation as described in this EIA for the purposes of recreation and fish and wildlife conservation.

Public Views and Responses. On July 26, 1983, the Fort Worth District issued a Public Notice of the proposal to implement a greenbelt corridor between Ray Roberts Dam and Lewisville Lake in lieu of new, traditional, recreation development. This public notice was mailed to 289 individuals, organizations, and governmental entities. Numerous responses were received as a result of the Public Notice, indicating a high degree of public interest in the project. Many requested that a public meeting be held. Also because of numerous request, the comment period on the proposal was extended by Public Notice dated August 15, 1983. The official comment period ended on August 31, 1983. Written comments received were divided almost equally, in number, between those in favor of and those opposed to, the greenbelt proposal.

In addition to formal comments received through the mail, a meeting was held in Aubrey on August 18, 1983, at the request of a group of landowners, representatives of the Corps of Engineers, Texas Parks and Wildlife Department, US Fish and Wildlife Service, and cities of Dallas

and Denton were present for the purpose of answering questions. There were about 100 people present and about 50 to 75 percent indicated that they owned property in the vicinity. There were about 35 questions/ statements presented by about 10 individuals. The overhelming mood of those present was strong opposition to the proposal for the reason of agricultural needs, tax losses, perceived degradation of environmental quality, traditional recreation needs at Lewisville, and the preliminarily appraised real estate values.

A public meeting was held in Aubrey, Texas, on September 26, 1983, in response to a large number of requests from concerned individuals. About 250 people attended and a total of 72 statements (61 oral and 11 written) were presented. Of the 42 statements presented which were in favor of the greenbelt concept, most were from representatives of environmental groups and Federal, State, and municipal government entities. Reasons for support included identified regional need for stream recreation, preservation of a dwindling natural resource and economic advantages. Of the 26 statements in opposition, a large number were from landowners; but opposition was also expressed by a locally affected Chamber of Commerce (Pilot Point), water supply district, County Commissioners, Court, Aubrey School District, and a State Representative. The primary concerns of those opposed to the proposal were loss of agricultural lands, appraised real estate values, and problems associated with increased recreationists and recreation traffic. Concern was expressed that support of the utility departments of the city does not represent support of Dallas and Denton. The question of Corps' authority was also concern of those opposed to the proposal. Four statements were presented which were not committed either way.

After that meeting, the city councils of both Dallas and Denton, local sponsors for the Ray Roberts Project, unanimously indorsed the greenbelt proposal as a trade-off for new recreation facilities development at Lewisville Lake. They, as well as the TPWD, requested that the Fort Worth District continue to develop a greenbelt plan between the lakes.

A public workshop was held on April 3, at the Aubrey School Cafeteria concerning the proposed greenbelt corridor and recreation planning for Lewisville Lake. Approximately 60 people attended the workshop. Workshop groups expressed concern that use of the river and/or a greenbelt corridor would create problems related to tresspass, trash dumping and littering, and disturbance of people and livestock by motorized traffic, particularly motorcycles and mini-bikes. Individual responses indicated a high degree of polarization on the issue of whether or not the greenbelt corridor would cause or prevent landowners/recreationists conflicts. A number of persons felt that a greenbelt-type resource would attract "serious" environmentalists who would not abuse the land, and/or that management by the Texas Parks and Wildlife Department would provide the type of control and supervision necessary to preclude vandalism and undesirable use. Other people felt that the greenbelt would attract undesirable users to the area, and that in its absence, there would not be a problem.

There was a clear consensus at the workshop that adequate fencing and frequent patroling would be essential to make a greenbelt proposal acceptable and functional. Both group and individual responses endorsed the concept of a buffer area between the public use areas and private property, including the acquisition of a visual easement between the "minimum viable" corridor and the "optimum" corridor. Restriction of motorized access was emphatically endorsed; other suggestions included provision of parking, boat launching facilities, and restrooms at FM 428 and Highway 380, and restricting bottles, cans, and guns from the greenbelt corridor.

Workshop group responses to the type of facilities needed at Lewisville included boat ramps, campsites, picnic tables, bathrooms, family-oriented facilities, primitive camping sites, trails, and faciltities for hunting and fishing. Individual responses included family facilities, screened camping buildings, picnic areas, boat ramps, hiking trails, fishing piers, and swimming areas. Most of the response indicading a strong need for traditional-type facilities are from per-

sons who indicated that they were opposed to a greenbelt proposal. Several responses indicated that existing parks at Lewisville should be better maintained or upgraded and re-opened before any new facilities are built. An additional comment was that additional lands should be purchased for any "new facilities, rather than crowding them onto existing public lands.

The need for increased maintenance of existing facilities, and improved supervision and control of park areas was consistantly expressed. Both the imposition of user fees and leaseing to cities for operation were suggested as methods for financing these recommendation. Workshop groups consistently endorsed the need for additional boat ramps, although no specific areas were identified as being deficient. Design comments included the need for longer ramps, particularly in areas of shallow water, in order to accommodate fluctuating water levels. Several of the groups as well as several individuals suggested the development of access areas at FM 428 and/or Highway 380. Two groups indicated that more boat launching lanes and controlled park areas preferred, while one group endorsed the greenbelt as being more economically feasible. A number of miscellaneous concerns were also expressed. Among these were concern over the effect on the local tax base of land acquisition for the greenbelt, the need for more specific information concerning the Corps' acquisition procedures, cited land values, and loss of income from farm lands. Other concerns expressed were the need for land owners to have direct access to the river, and fears that the Elm Fork will be developed if a greenbelt is not implemented.

After the workshop, and throughout the public involvement process, overwhelming support has been expressed by recreationists, environmental groups, and numerous individuals for a greenbelt rather than new park facilities at Lewisville Lake. Although strong opposition was originally expressed by area landowners, those objections became less strenuous as public involvement continued.

A final Public Notice dated 13 November 1984 (Attachment 1) of the recommended plan described in the EIA was sent to a mailing list of over

300 individuals, agencies, and organizations. A total of 76 comments were received in response to that notice. Opposition to the proposal was expressed in 26 of the comments received. Among the objections were letters from real estate companies, lawyers, several landowners, and eight copies of a form letter. Also objecting to the proposal was the Aubrey Independent School District. Support for the proposal was expressed in 50 of the letters received. Although the majority were from individuals, continued support was expressed by the Texas Conservation Foundation, Texas Committee on Natural Resources, Fort Worth Audubon Society, Lone Star Chapter of the Sierra Club, and U.S. Fish and Wildlife Service. Several comments in support of the proposal were received from affected landowners. Considering all comments received and the continued strong support of the project sponsors, Dallas, Denton, and the Texas Parks and Wildlife Department, it was determined that additional public meetings would not be cost effective or add to the decision making process.

ATTACHMENT I

PUBLIC NOTICE
AND
COMMENTS RECEIVED

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO ATTENTION OF:
Planning Division

13 NOV 1984

PUBLIC NOTICE

GREENBELT CORRIDOR
BETWEEN
RAY ROBERTS DAM AND LEWISVILLE LAKE

Interested parties are hereby notified that the Fort Worth District, Corps of Engineers, is recommending development of a greenbelt corridor between Ray Roberts Dam and Lewisville Lake to higher Corps authority for review and approval. Further, the Fort Worth District has determined that although needs exist for both lake-type and stream-oriented recreation, the broad public interest would best be served through development of a greenbelt corridor at this time, with development of new recreation facilities at Lewisville Lake deferred to a future date.

Background. House Document 276, dated August 25, 1965, the authorizing document for Ray Roberts Lake, authorized a raise in the pool elevation of Lewisville Lake. It also authorized relocation of affected recreation facilities, development of new facilities, and acquisition of lands for public use and access at Lewisville Lake. A greenbelt corridor between the lakes was originally proposed as a recreation alternative in the 1974 General Design Memorandum for Ray Roberts Lake. At that time the proposal received the endorsements of the U.S. Fish and Wildlife Service and the Texas Parks and Wildlife Department (TPWD). In 1976 the TPWD expressed an interest in cost-sharing in a greenbelt and requested that the Corps of Engineers investigate the proposal further. Due to unsettled water rights issues between the cities of Dallas and Denton, sponsors of the Ray Roberts project, detailed evaluations of the greenbelt were not made at that time. When water rights issues were settled in 1980, the cities of Dallas and Denton entered into water supply/recreation contracts with the Corps of Engineers. Those contracts include the plan for recreation development at Lewisville Lake which had been recommended in the 1974 General Design Memorandum.

Master planning for recreation development at Ray Roberts and Lewisville Lakes was initiated in 1981. In January of 1983, the city of Dallas requested that the Fort Worth District investigate the feasibility of substituting a greenbelt corridor for the new facilities development at Lewisville Lake for which the project sponsors are contractually obligated. A public notice was issued in July 1983, which presented the results of that investigation and recommended that a greenbelt be implemented in lieu of new

facilities development at Lewisville Lake. Reasons for that recommendation were: monetary savings to the Federal Government and local sponsors; lower operation and maintenance costs; operation and maintenance by the most capable manager, the TPWD; unique recreation opportunities provided; and, equivalent economic benefits. Concerns of existing landowners and approval of higher Corps authorities were identified as issues that remained to be resolved.

Due to public concerns, the comment period on the recommendation was extended beyond the initial 30-day period. A public meeting was held in Aubrey, Texas, on September 26, 1983. Statements at that meeting, like comments received on the public notice, were about equally divided between those opposed to and those in favor of the proposal. Opposition was expressed primarily by landowners in the corridor area, and support was expressed primarily by public agencies, governmental entities, and environmental groups. During this comment period, the District's higher Corps authority, the Southwestern Division in Dallas, provided comments on the Fort Worth District's recommendation. The Southwestern Division expressed the opinion that substitution of the greenbelt for new facilities is not an acceptable trade-off since they provide different types of recreation benefits. The Division Office also questioned the discretionary authority of the Chief of Engineers to approve the greenbelt but allowed the District to continue to evaluate the greenbelt on its own merits as an additional recreation feature at Lewisville Lake. Southwestern Division has stated that if a greenbelt is recommended, determination of discretionary authority by the Office of the Chief of Engineers or Congressional authorization may be required. On December 15, 1983, the Fort Worth District issued a public notice that the study of the greenbelt corridor proposal would be continued.

Several alternative plans were formulated to address authorized recreation development at Lewisville Lake, and all but three were eliminated due to inconsistency with Corps recreation planning philosophy or lack of support by the project sponsors and/or TPWD. The three plans considered in detail include: (1) new facilities at Hickory Creek Park, (2) a "greenbelt only" with no additional facilities development, and (3) a combination plan with a greenbelt and new facilities at Hickory Creek Park (Plate 1). All three of these plans include the relocation of all facilities affected by the Lewisville Lake pool raise. On April 3, 1983, a public workshop was held, again in Aubrey, Texas, to obtain the input of interested parties. Many landowners again expressed opposition to the greenbelt but stated milder objection to conservation easements or a smaller greenbelt. Environmentalists and recreationists stated overwhelming support for a full size greenbelt corridor. Almost all parties recognized a need for new flat water type recreation facilities, but no support was specifically expressed for a facilities-only plan.

Proposed Action. As a result of continued reevaluation of project economics, extensive public involvement, and coordination with the project sponsors, it has been determined that the broad public interest would best be served through development of the greenbelt at this time with a plan for new facilities development at Hickory Creek Park at a future date. The greenbelt as recommended includes fee acquisition of about 660 acres, conversion of about 440 acres of existing flowage easement lands to fee simple, and acquisition of a conservation easement on about 500 acres adjacent to the upstream portion of the corridor (Plate 2). The lands to be acquired in fee would be the minimum that TPWD considers to be viable for stream-oriented recreation pursuits between the lakes. Acquisition of conservation easements adjacent to the corridor would assure that the rural character of the river corridor remains intact and would provide a visual buffer between the river and future development. Easement provisions would allow landowners to retain title to their lands and would allow for continuance of existing agricultural pursuits such as pasture and row crops. Restrictions on more intensive agricultural use and on structures such as residences, barns, or outbuildings would be conditions of the conservation easements so that the area's rural character would not be lost. The corridor would be delineated along the fee acquisition line, and all recreation trails, primitive campsites, access points, and boat launching facilities would be located on fee lands.

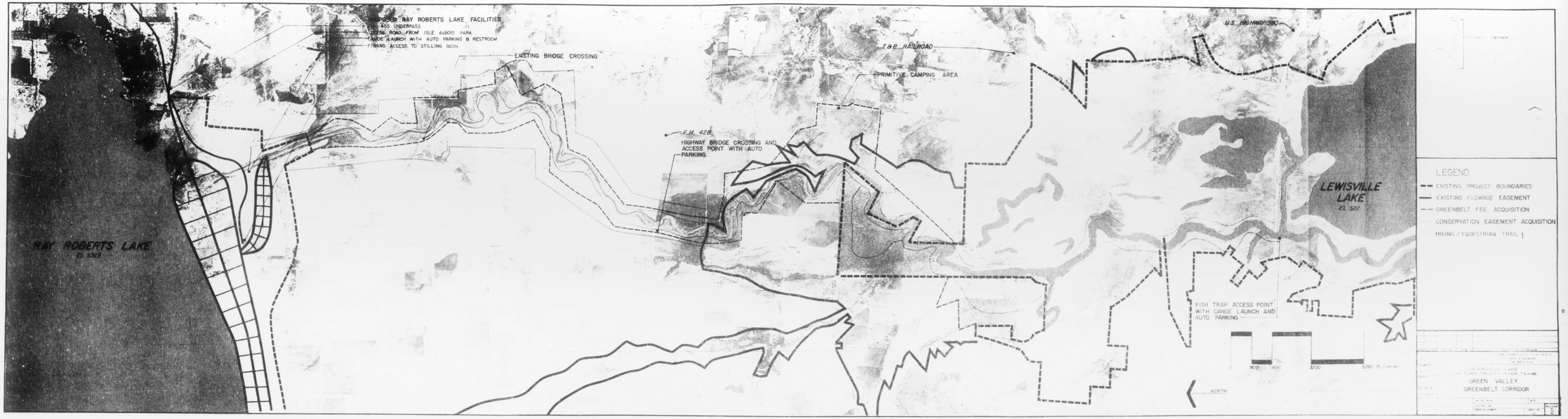
The proposed future facilities development would be cost-shared by willing sponsors as desires and needs dictate. The future sponsors would operate and maintain new facilities in Hickory Creek Park as a state, local, or regional park, depending on sponsorship. Proposed future development would consist of a total of approximately 165 camping and picnic units, boat launching lanes, and other associated facilities. Plate 1 shows the location of Hickory Creek Park. Development of Hickory Creek Park in the future would help to meet needs for flat water recreation facilities. Although such needs currently exist, there is no willing sponsor for these facilities at this time, and the resource will remain available for future development. The TPWD is currently developing Lewisville Lake State Park on the east side of the lake and has stated no desire to participate in Hickory Creek Park at this time.

First costs of the greenbelt would be shared by Dallas, Denton, TPWD, and the Corps of Engineers. Operation and maintenance of all public land from Highway 380 upstream to Ray Roberts Dam, including the greenbelt, would be by the TPWD. Total first cost of the greenbelt corridor is estimated at $3,036,500. The greenbelt corridor plan has a benefit to cost ratio of 5.35 to 1.0. By comparison, the combination plan and the facilities only plan have benefit to cost ratios of 4.01 and 3.33, respectively. The combination plan, however, has the greatest net excess benefits ($2,464,600) of all alternatives considered and would provide the greatest diversity of recreation benefits, but its increased

costs ($7,036,500 first cost) are considered unacceptable to the recreation sponsors. An Environmental Impact Assessment has been made of the proposed action pursuant to the requirements of the National Environmental Policy Act. Upon completion of the public comment period, this recommendation will be incorporated into the update of the master plan for Lewisville Lake which is scheduled to be submitted to the Southwestern Division Office in Dallas for approval in December 1984. Although the Fort Worth District interprets this recommendation to be within the scope of the authorizing document, it is likely that the recommendation will be forwarded by Southwestern Division to the Office of the Chief of Engineers for review of discretionary authority.

This public notice is being distributed to all known interested parties in order to assist in developing facts upon which a final decision by the U.S. Army Corps of Engineers may be based. A public meeting has not been scheduled but will be considered if a justifiable request is received in writing prior to the close of the comment period. Copies of the Environmental Impact Assessment may be obtained by contacting Mr. Roger Hamilton or Mr. Paul Hathorn at telephone number (817) 334-2095. Comments regarding this Public Notice or the Environmental Impact Assessment should be addressed to the District Engineer, Fort Worth District, 819 Taylor Street, Fort Worth, Texas 76102-0300. All factors which may be relevant to the proposal will be considered. Within 30 working days of the date of this notice, if no significant comments are received, it will be considered that there are no objections.

THEODORE G. STROUP
Colonel, CE
District Engineer


PROPOSED RAY ROBERTS LAKE FACILITIES
455 UNDERPASS
ACCESS ROAD FROM ISLE duBOIS PARK
CANOE LAUNCH WITH AUTO PARKING & RESTROOM
FISHING ACCESS TO STILLING BASIN
EXISTING BRIDGE CROSSING
T & P RAILROAD
PRIMITIVE CAMPING AREA
U.S. HIGHWAY 380
F.M. 428
HIGHWAY BRIDGE CROSSING AND ACCESS POINT WITH AUTO PARKING
RAY ROBERTS LAKE
EL. 538
LEWISVILLE LAKE
EL. 522
FISH TRAP ACCESS POINT WITH CANOE LAUNCH AND AUTO PARKING
NORTH
LEGEND
EXISTING PROJECT BOUNDARIES
EXISTING FLOWAGE EASEMENT
GREENBELT FEE ACQUISITION
CONSERVATION EASEMENT ACQUISITION
HIKING / EQUESTRIAN TRAIL
GREEN VALLEY
GREENBELT CORRIDOR